PREAMBLE

1. Philosophy

1.1. ***People Before Cars*** in the design of layouts for residential developments encapsulates the County Council's main objective for this document, which is to ensure that housing layouts contribute towards encouraging more sustainable travel by minimising the need to use cars particularly for shorter trips to local facilities.

1.2. This can be achieved by providing: high quality, safe and direct pedestrian and cycle links to the local facilities. For longer distance trips, where walking and cycling is less likely, it is important that housing layouts provide for access by bus so that people have the option of using public transport.

1.3. It embraces **sustainable development** policies contained in both Central (National Planning Policy Framework 2012 - NPPF) and Local Government policies and initiatives and is designed to complement and sit alongside other Design Guidance provided by the Local Planning Authorities in Oxfordshire and the Manual for Streets (See OCC 'Position Statement – On the Application of Contemporary Highway Design Guidance in Oxfordshire' on both volumes of the MfS).

1.4. In line with the recommendations of the NPPF, this Guide is designed to avoid the need to make objections to development that may otherwise have a '**severe**' impact and are '**unsustainable'** in nature.

1.5. There are specific 'Environmental Guidelines for the Management of Roads in the Chilterns', which apply to the Chilterns Area of Outstanding Natural Beauty in Oxfordshire – see: http://www.chilternsaonb.org/.

1.6. The emphasis for **'people movement**' can best be described by the following:
'hierarchy of significance':

i. walking
ii. cycling
iii. public transport
iv. private car usage

This will be applied, particularly bearing in mind the needs of people with sensory or mobility difficulties (The Disability Discrimination Act (DDA) & see *Inclusive Mobility* 2002), to achieve safe, convenient and attractive places outside the home that are **sustainable** and economic to provide and maintain.

1.7. Every development site is **unique**, and this Guide should enable designers to exploit natural features to the fullest advantage. There are both opportunity and need for the exercise of real design skills, and therefore it is recommended that qualified professional advice is employed in the design of development services.

1.8. Whilst, the document includes recommended 'standards' they should **not be considered overly prescriptive** - alternative proposals, which can be shown to satisfy the principles and *Main Objectives* (§2) may well be approved by agreement with the Planning and Highway Authorities.

1.9. **Innovation** is to be welcomed, where the principles are clearly demonstrated and achieved - designers should not consider themselves restricted to the 'examples' or 'standards' included in this document.

2. Main Objectives

2.1. To ensure that housing layouts contribute towards encouraging more sustainable travel by minimising the need to use cars particularly for shorter trips to local facilities.

2.2. Provision of quality facilities for pedestrians, cyclists and public transport, particularly bearing in mind users with mobility difficulties, with a view to reducing car usage. However, the need to accommodate vehicle movement and parking will remain and has to be fully considered in the design process.

2.3. To help create attractive developments that are enjoyable to live in and safe for all users bearing in mind the '*hierarchy of significance*' (§1.6).

2.4. To help create developments that are accessible, legible and convenient to all users, including the Mobility Impaired - includes those with difficulty seeing, hearing, walking, finding their way around, or any combination of all these.

2.5. To provide developments designed to emphasise a sense of place and community, with movement networks to enhance these qualities, but with full links with adjacent areas to ensure permeability.

2.6. Provision of sufficient non-prescriptive standards to enable more rapid appreciation of the Highway Authority's requirements by developers / Planning Authorities to minimise negotiation times for both layout determination and future adoption.

2.7. To secure by design, traffic speeds commensurate with the safety and convenience of all users of the road network. The target speed in such residential areas will be 20mph or less.

2.8. To secure an adoptable movement network at a reasonable cost with an extensive design life and low maintenance costs.

3. Introduction

3.1. Oxfordshire County Council (as local Highway Authority) has produced this **Second Edition of the Residential Road Design Guide** to aid in understanding the requirements of the Highway Authority for the design of roads, cycle infrastructure, footways etc.

3.2. This Design Guide endorses the principles embodied in **Street Design for All** and **Manual for Streets**. Clarity, regarding the Council's attitude to both volumes of the *Manual for Streets* is contained in our Position Statement. This has been informed by the guidance contained in the NPPF.

3.3. The Second Edition of the *Residential Road Design Guide* document allows considerable **design flexibility** so it is essential that early consultation with both the Local Planning Authority and the Highway Authority on development proposals is undertaken and that a team approach, involving professionals on both the developers and the Local Authorities sides is used throughout the development process as recommended by the *Manual for Streets*.

3.4. The key factors to be taken into account by this 'team' are:

i. The nature of the place where development is to occur.
ii. How that place relates to its surroundings including movement routes.
iii. The framework of development, including the network of spaces and movement patterns.

3.5. A **pre-application** process is contained on our website '**Transport for New Developments**' and scoping should be undertaken to determine the extent of supporting documentation considered appropriate for a particular proposed development.

3.6. The **movement framework** should ensure that travel by foot, bicycle and public transport have priority, and should take into account:

i. Priorities for movement; firstly by foot, also by bicycle, public transport and car.
ii. The need of the mobility impaired should receive particular attention.
iii. The relationship between movement and all forms of development.
iv. The links between new movement routes and existing infrastructure.

3.7. As part of the consideration of the **movement network** it is quite possible that requirements for off-site works (e.g. a new junction onto an existing public highway or other transport infrastructure requirements) or indeed contributions for enhancement / provision of public transport may be identified.

3.8. In order for these to be formally secured as part of any planning consent ultimately issued, an agreement pursuant to **Section 106** - Town and Country Planning Act 1990 would be required.

3.9. In addition to transport related issues such an agreement could also contain other **obligations** of the developer/landowner e.g. education, libraries, contributions, recreational facility provision, future maintenance of public open spaces etc.

3.10. The above listing is not any more than for the purposes of example, and bearing in mind the significant cost implications of the obligations for the developer / landowner it is imperative that early consultation enables identification of the requirements at the start in the development process.

3.11. Whilst the various following sections of the Guide contain information on standards which the Local Highway Authority consider appropriate, they **should not be slavishly** followed. **Innovation** will be welcomed, where the spirit of the standards are met.

4. The Movement Framework

Principles

4.1. The Introduction section lays stress on the more sustainable modes of transport and particularly prioritises pedestrian and cycle movement as well as public transport in advance of the needs of the motor car (§1.6).

4.2. The need to accommodate vehicle movements and parking will remain, and has to be fully considered in the design process.

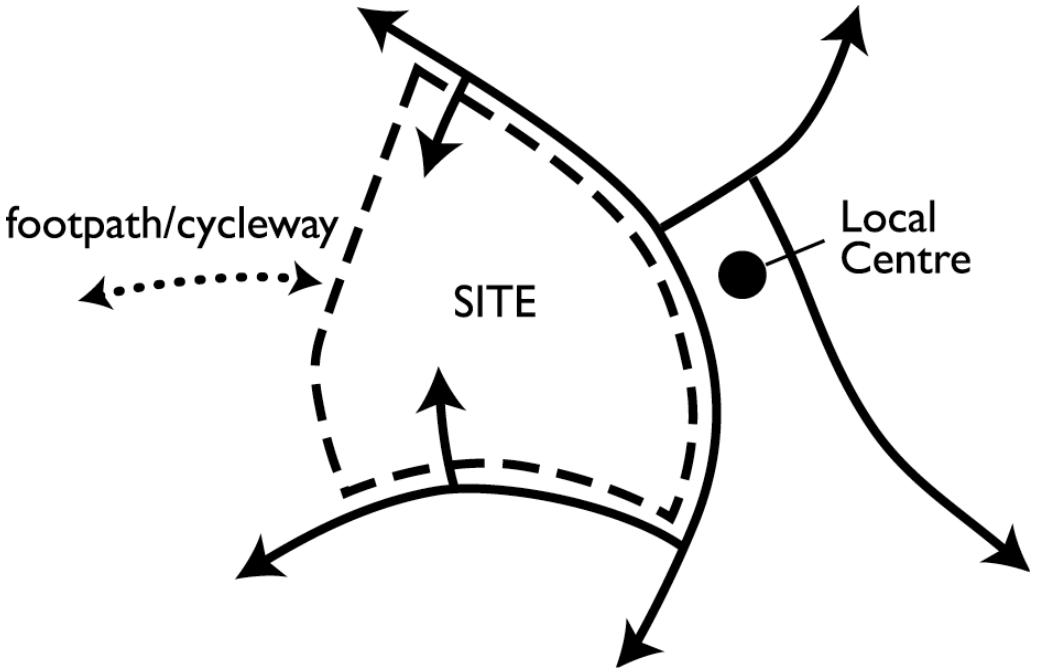
4.3. A '**Movement Framework**' for new development is that which provides: 'The best way to ensure that travel by foot bicycle and public transport have priority'.

4.4. This framework development process is advocated and should take account of (§ 3.6):

i. Priorities for movement; firstly by foot, also by bicycle, public transport and car.
ii. The needs of the mobility impaired should receive particular attention.
iii. The relationship between movement and all forms of development.
iv. The links between new movement routes and existing infrastructure.
v. Consideration and assessment of the impact the development movements will have on existing infrastructure.

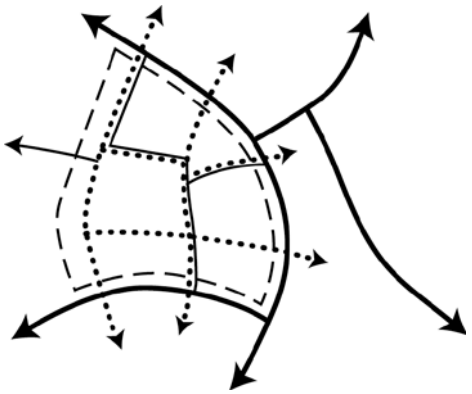
4.5. Each of the particular forms of movement will be dealt with in this section in the priority order given above, and principles of good design and practice will be provided for guidance.

4.6. The following diagrams illustrate the principles of developing a movement framework:

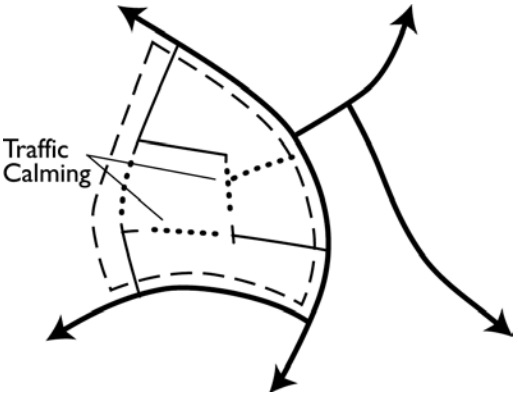


Schematic of New Residential Development Site with Connections to Existing Roads

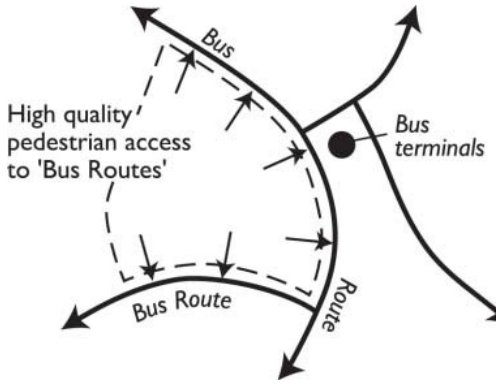
1. Footpath / Cycleway Network



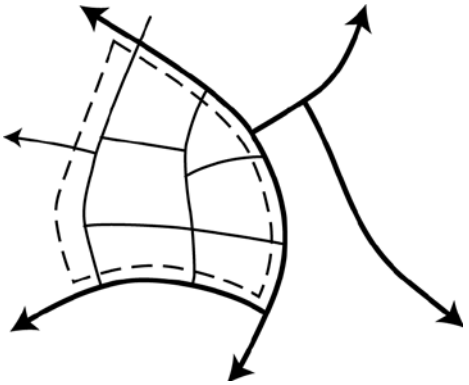
3. Road Network



2. Public Transport Network



4. Complete Movement Networ



Walking

4.7. Refer to Oxfordshire Walking Design Standards.

Cycling

4.8. Refer to Oxfordshire Cycling Design Standards.

TECHNICAL

5. Road Types

5.1. The following table outlines some different road types within residential developments, their characteristics and where they should be used. This list is not exhaustive and innovation is encouraged.

5.2. If necessary further information is available on request regarding these suggested road types. See next Chapter for some further information on road alignments etc.

Road Description	**Max. recommended Number of Dwellings***	**Design Speed**	**Carriageway & Footway Details****	**Description and Comments**
Local Distributor	n/a	50kph (30mph)	7.3m 2 X 2m footways	Multipurpose local road, generally forming part of local County network. Collected frontage access in forward gear only.
Link Road	n/a	50kph (30mph)	6. 75m 2 X 2m footways	Links residential elements and accommodates regular non-residential uses. Frontage access in forward gear only. Min 3m verges required.
Major Access Road	700 400 link or loop 200 cul-de-sac	30kph (20mph)	6.75m 5.5m 2 X 1.8 footways.	Direct access in or out of a residential area may serve non-residential uses regularly accessed by vehicles <7.5T (a plated HGV). If a bus route 6.75m carriageway required.
Minor Access Road	200 link or loop 100 cul-de-sac	30kph (20mph)	5m (5.5m for first 12m) 2 X 1.8m footways.	No access restrictions. Special surface finish.
Access Way	50 link or loop 25 cul-de-sac	30kph (20mph)	4.8m 2 X 1.5m.	No access restrictions. Special surface finish.
Access Lane	50 link or loop 25 cul-de-sac	30kph (20mph)	6.0 m overall 4.2m vehicle 1.8m pedestrian over-runnable or 2 x 1m where kerb height is < 25mm.	Specifically designed for rural access. Pedestrian margin over-runnable.
Mews	25 cul-de-sac	30kph (20mph)	6.0m overall 4.8 vehicle tracked route. Pedestrian safe area to be considered by design	Urban form. Special surface finish. Special junction criterion.
Residential Square	Defined by space enclosed	As host road	4.8m tracked vehicle way.	Urban form. Ramped approaches to tabled area. Special surface finish. Central feature for driver orientation.

* Number of residential units is guidance only as to hierarchy road hierarchy. Other factors may produce a demand for a higher category street.

** The widths given are minimums for the road description and additional width may be required for adoptable roads.

6. Technical Support Data

Junction Design and Sight Lines

6.1. Street junctions, within a residential development should be considered as integral part of the overall layout, requiring careful consideration.

6.2. One of the main requirements of a street junction, within a residential development, is to provide for pedestrian crossing on a direct desire line. This requires either:

i. The junction radii should be kept to a minimum (1.0m max radius). Large vehicles will have to use the offside running lane to complete the left turn without the rear wheels mounting the kerb. Vehicle tracking drawings should be provided to ensure this is possible. The small kerb radius at the junction has several advantages. In addition to providing for direct pedestrian crossing, vehicle speeds are reduced to 10 mph - 15 mph which reduces the likelihood of vehicle- cycle conflicts.

Or

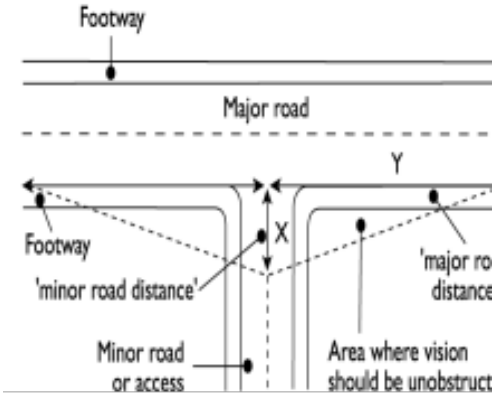
ii. Larger radii may be used for the junction but the footways are built out at the corners. These junctions should be combined with a speed table at the junction.
The actual treatment of junctions will be on a case by case assessment that best suits the overall design of the development. However, in all cases tactile paving should be provided to assist the blind and partially sighted.

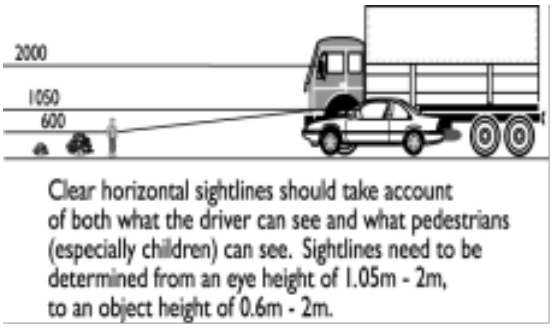
6.3. Generally, overrun areas should be avoided, although there may be occasions when these are acceptable. Bringing the carriageway up flush with the footway level at the junction at busy crossings should be considered at all junctions as it implies priority to pedestrians.

Visibility at Junctions

6.4. Visibility at junctions is defined by means of the 'X'-distance and 'Y'-distance shown on the following diagram.

6.5. The sightlines should take account of what the driver can see and what pedestrians (particularly children) can see – hence they should be determined from a drivers eye height of 1.05-2.0m and an object height of 0.6-2m.





6.6. An 'X'-distance of 2.4m is normally required but in certain circumstances (e.g. lightly trafficked, slow speed street) 2.0m may be acceptable. Agreement should be sought with the Highway Authority at an early stage for this dispensation.

6.7. Speed surveys should be carried out to determine actual road speeds rather than posted Speed Limit Orders. The following table provides the default required sightlines unless the standards of other guidance can be shown to be appropriate to context.

Table of Required Sightline ('Y')-Distance for Speed on Through Road

Kph	30	40	50	60	70	85	100	120
Mph	19	25	31	37	43	53	62	75
SSD (m)	33	45	70	90	120	160	215	295

Speed Restraint and Forward Visibility

6.8. One of the key design aims should be to reduce speeds within the development to 20mph. Generally speed can be restrained by limiting straight or uninterrupted lengths of street to less than 70m. Other features which can be introduced to control speeds are listed below:

i. Physical features, involving vertical or horizontal deflection. However, speed humps should be considered only as a last resort and other measures should be given preference.

ii. Changes in priority at junctions can help to produce a reduction in speed and roundabouts are particularly effective in this respect.

iii. Street dimensions. In addition, to the width between buildings influencing driver speed, keeping lengths of street between junctions short should also be a key design element.

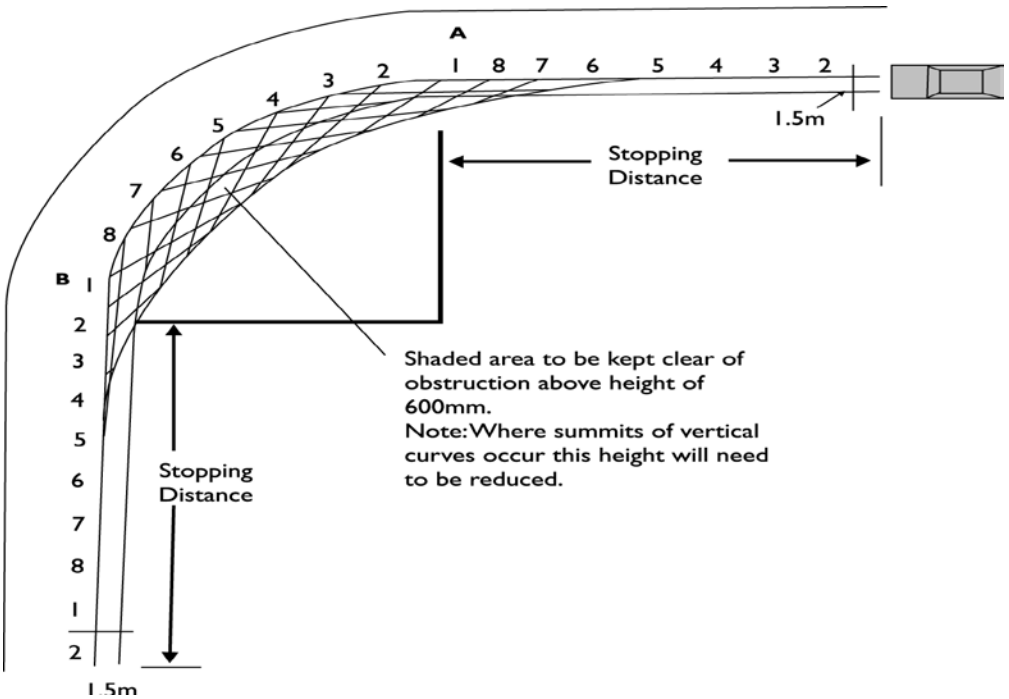
iv. Limiting forward visibility has a major influence on speed – refer to table below.

v. Providing appropriate street features such as on street parking, obstructions in the street, edge marking that visually narrow the carriageway and changes in texture or colour can be part of the tool box of measures. All these features give a psychological message, which encourages drivers to reduce their speed.

6.9. Limiting forward visibility should be used to control speeds within the development and this should be given priority in formulating layouts. The following table gives the forward stopping sight distance required for given speeds.

Table of Required Forward Visibility Distance for Speed on Through Road

Kph	16	20	24	25	30	32	40	45	48	50	60
Mph	10	12	15	16	19	20	25	28	30	31	37
SSD (m)	9	12	15	16	20	22	31	36	40	43	56



6.10. All new residential developments containing an adoptable highway network will be expected to form part of a 20mph (30kph) zone. Residential developments, which have streets not offered for adoption, will not be excepted from the imposition of the principles outlined in this document.

6.11. Speed restraint measures should be used throughout the 20mph zone and no warning signs are required within the zone. Signs (in accordance with Traffic Advisory Leaflet 2/93) and an entrance gateway are, however, required to indicate to drivers that they are entering the zone.

6.12. It is essential that the designer appreciates that speed restraint is not just a matter of using the engineering features, described in this section. A driver's perception of a safe speed is also materially affected by the spacing, form and proximity of the buildings served by the road, in addition to the surface materials used and the effective use of hard and soft landscaping. A composite design will be called for, which must be agreed at an early stage by both Planning and Highway Authorities.

Number of Access points

6.13. A minimum of two access points from the surrounding highway network should be provided where the number of dwellings exceeds 500 units.

Emergency Access

6.14. If more than 150 dwellings and less than 500 dwellings are served by a single access an emergency access should be provided. This may take the form of an uprated cycle track or a reinforced grass area. The details must be agreed with the Highway Authority.

Access for Servicing

6.15. Refuse vehicles must be able to reach refuse collection within 25m for single domestic refuse bin or 5m for larger communal (shared) bins. Developers proposals should show the location of the refuse storage and ensure by means of vehicle tracking plots that refuse vehicles can access the location without reversing.

6.16. It is common in recently built developments to see refuse bins left on street mainly because there is no suitable place within the cartilage of the property to store them. Developers should therefore give consideration where residents will store bins and avoid the need to keep bins on street for convenience.

Access for Fire Tenders

6.17. Building Regulations require access for fire tenders to a point no further than 45m from all parts of the ground floor of any residential building. Any road or private drive being part of that access must be no less than 3.7m wide between kerbs (3.1m minimum for a gateway or similar short narrowing), and should have a minimum centre line radius of 6.6m (or 7.8 between walls) and headroom of 3.7m.

6.18. The access (including manholes etc.) should have a carrying capacity of a 12.5 tonne vehicle (bridges etc. should have a minimum carrying capacity of 17 tonnes).

6.19. A cul-de-sac longer than 20m must have a turning area suitable to enable a fire tender to carry-out a three point turn.

6.20. Where there are flats of more than four storeys there are additional access requirements, about which, the local Building Control Authority / Building Regulations should be consulted.

Gateways

6.21. A gateway feature is required at each entrance to a 20mph zone - its main purpose is to provide a visual indication to drivers that they are entering a special area, where they must act to control their speed and give greater priority to more vulnerable road users.

6.22. The gateway feature, may consist of a 'pinch point' of buildings or walls at the entrance or of a physical gateway structure, either arching across the road or a pair of substantial piers close to the carriageway.

6.23. The footway may pass through the gateway, though preferably it should go round it, so as not to dilute the 'narrowing effect' being sought.

6.24. Physical gateway structures should be designed to withstand vehicular impact and should provide a headroom to be agreed with the Highway Authority / Planning Authority representatives (a headroom of 4.2m is the minimum likely to be required). The developer will be required to accompany his design submission for the gateway with an independent **road safety audit**.

6.25. Structures over the highway need to be licensed, and this issue should be discussed with the Highway Authority representatives at an early stage in the gateway design.

6.26. Formal arrangements will need to be made for the future maintenance of the gateway structure. In the event that the developer / purchaser wishes to pass that liability to a public authority, then, dependent upon the form of the gateway, it may be that District, Town or Parish Council or the Highway Authority could adopt - but in each of the above options a commuted maintenance sum will be required.

Changes in Horizontal Alignment

6.27. These should be generally be tighter than the minimum centre line radius specified below, down to a minimum centre line bend radius of 7.5m. The deflection angle should be greater than 45° and a mountable shoulder may be required to enable larger vehicles to overrun, although this should be avoided if possible.

C/Way width (m)	Minimum CL Radius (m)
5.0-6.75	20
4.1-4.8	13.6

Carriageway Widening on Curves

6.28. As a general guide, it is suggested that carriageway widening is normally needed to the following extent on bends curving through more than 10 degrees along roads serving over 25 dwellings

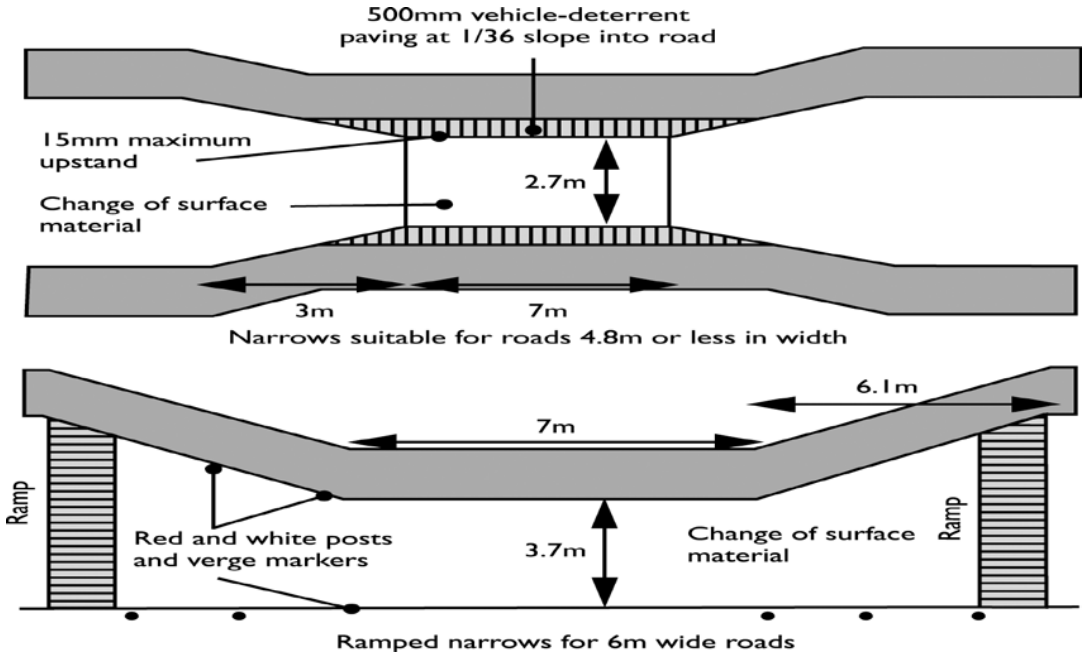
Centre line radius (m)	20	30	40	50	60
Min. widening (m)	0.60	0.40	0.35	0.20	0.15

6.29. However, the need for widening may vary according to the amount of traffic on the road and may also be influenced by the amount of forward visibility provided between passing places on each side of the bend.

6.30. On very lightly trafficked roads, the chances of two large service vehicles, such as pantechnicons or buses needing to pass on the bend must be sufficiently remote to make widening unnecessary. Similarly, where adequate forward visibility is provided between oncoming vehicles it will be possible for large vehicles to wait until the bend is clear and to use part of the opposite lane when turning. Even with a 15 m outer curve radius a pantechnicon can turn on a 5.5 m carriageway without any widening and without using the whole of the carriageway width.

Changes in Horizontal Alignment - Narrowings

6.31. Drivers will wait for oncoming traffic to pass at narrowing of the carriageway to 2.7m over a length not exceeding 7 metres. A 500mm wide mountable shoulder either side will enable service vehicles to negotiate this layout. This type of measure is not appropriate for shared surfaces. Mountable shoulders should always be designed with slope and surface finish to discourage parking on them. This form of speed constraint is also suitable as an element of the measures, with a raised table at footway/cycleway crossings of a carriageway.



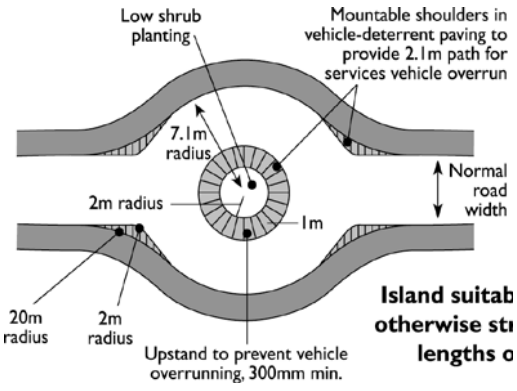
Changes in Horizontal Alignment – Chicanes

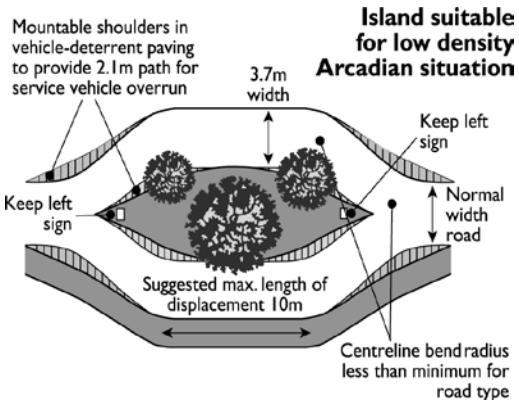
6.32. To achieve effective restraint the lateral displacement of the running lane must be at least 2m over a length no greater than 10m. The carriageway width at entrance and exit of the chicane may be reduced to 2m, but a mountable shoulder may be necessary to provide a 3.1m wide path for service vehicles. This measure is not suitable for shared surfaces.

Changes in Horizontal Alignment – Islands

6.33. Whilst the island may be any shape subject to the minimum dimensions given in the diagrams below, a lateral displacement of the running lane by at least 2m must be achieved. Mountable shoulders may be used to enable the passage of service vehicles, but the centre of the island should not be over-runable by any type of vehicle. This layout type is not suitable for shared surfaces.

6.34. N.B For islands to accommodate tree planting a minimum width of 3m will be required.





Road Markings

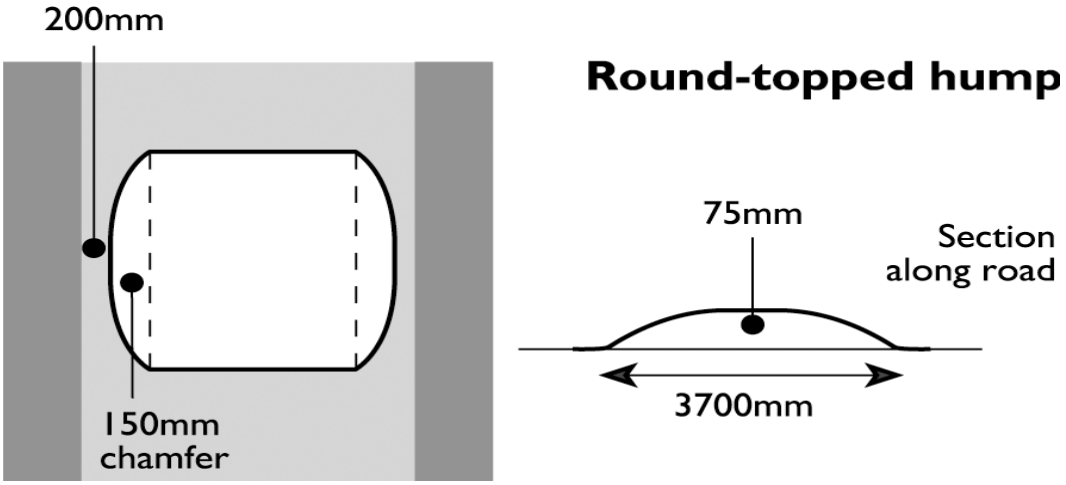
6.35. Centre line markings are not required in new developments and there is some evidence that the lack of them helps reduce vehicle speeds. There is also normally no requirement for

other road markings, within the development, except at the access junctions onto the

existing highway network. The developer should confirm with the Highway Authority at an early stage where road markings are required.

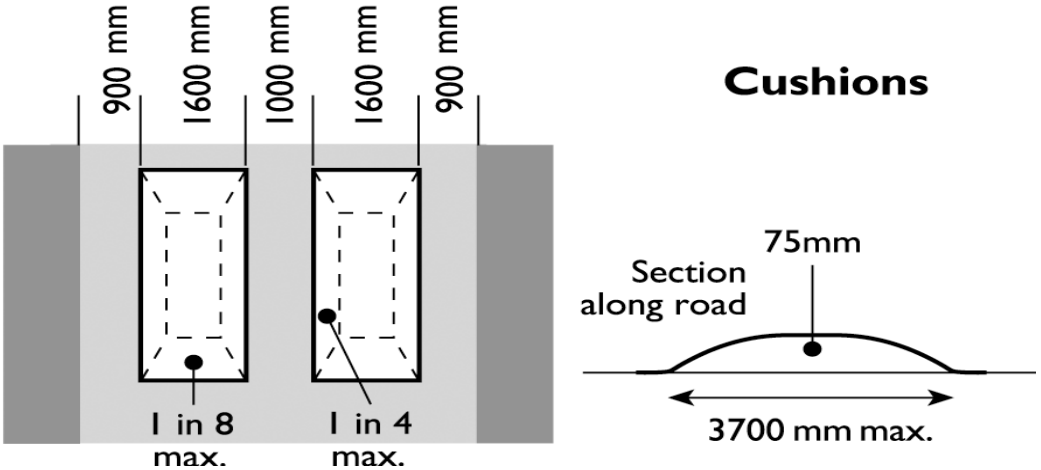
Changes in Vertical Alignment - Humps

6.36. Round topped humps should be 75mm high and no longer than 3.7m. They are not appropriate for shared surfaces, nor generally with carriageway widths of 6.0m or greater.



Changes in Vertical Alignment – Cushions

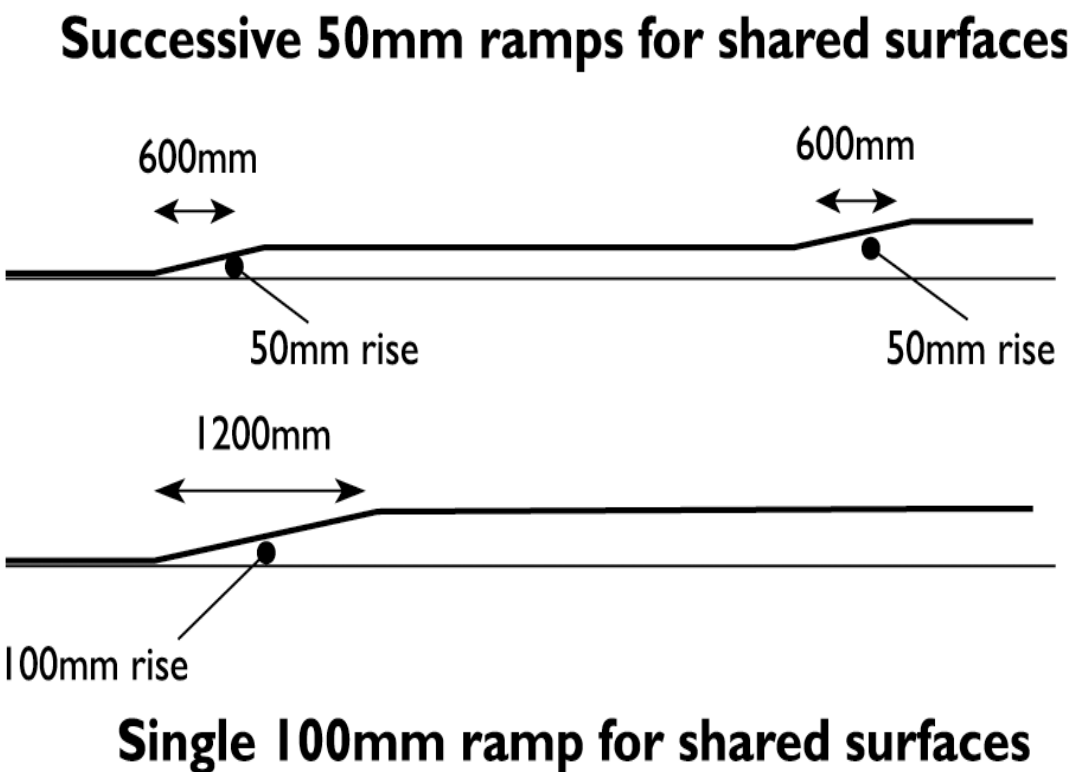
6.37. Where the carriageway width is 6.0m or more and is likely to be used as a 'bus route', and will also carry emergency services, speed cushions should, therefore, be used rather than humps.



6.38. They are specially designed to allow the wheels of buses and wide wheelbase vehicles to pass either side of the raised area – but cars have to negotiate the humps. They should be constructed in pairs to the dimensions given in the diagram below.

Changes in Vertical Alignment – Ramps

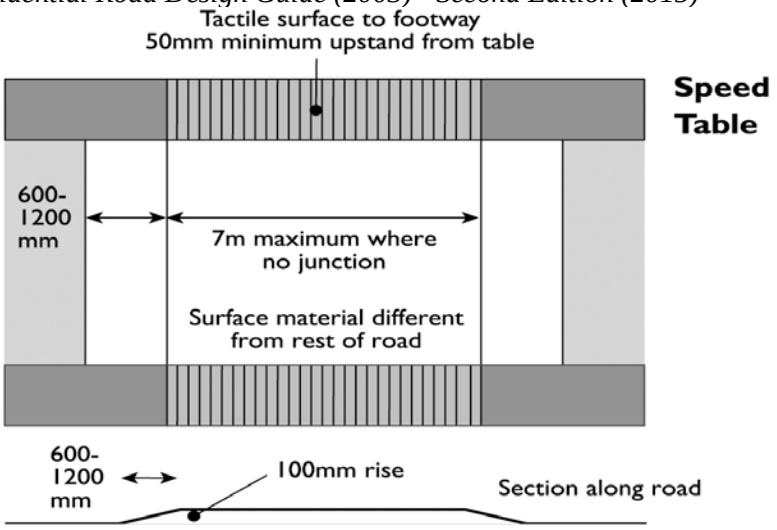
6.39. Single ramps with a rise of 100mm over 1200mm or successive ramps of 50mm rise over 600mm are particularly appropriate at the entrance to shared surfaces or within them.



Changes in Vertical Alignment - Speed Tables

6.40. Whilst, this particular layout is seen as a 'last resort' for solely speed restraint purposes, it is however, particularly appropriate to serve as a means of highlighting a crossing of the carriageway by a cycle and/or pedestrian route. They will need to be 'reinforced' with other hard and/or soft landscaping features and with appropriate signing where the pedestrians/cyclists have 'right of way' (the preferred solution).

6.41. A raised table of maximum length 7m (when not at a junction) may be formed by approach ramps rising over a minimum length of 1500mm. If provided on a 'bus route' the rise should not exceed 75mm provided on a gradient of 1 in 15, and the raised platform should be no shorter than 6m - generally a sequence of speed tables on a bus route will not be acceptable. Tactile surfaces should demarcate carriageway and footway for the benefit of the visually impaired.


Tactile surface to footway
50mm minimum upstand from table
Speed Table
600-1200 mm
7m maximum where no junction
Surface material different from rest of road
600-1200 mm
100mm rise
Section along road

Changes in Vertical Alignment - Table Junction

6.42. A road junction may be treated as a raised table approached by ramps as described in 'Speed Tables' above - tactile surfaces should demarcate carriageway and footway too.

Changes in Vertical Alignment - Shared Surfaces

6.43. Where a residential square forms a feature along a conventional road, its approaches should be ramped as described under 'Speed Tables' so that the whole shared surface becomes a raised plateau. The vehicle way should be demarcated by channels, rows of setts and the different paving colour of the perimeter footway will be sufficient for the visually impaired.

Complementary Measures

6.44. The use of these measures should be discussed at an early stage with the Planning and Highway Authorities as they will have an impact on the design layout, character and visual appearance of a scheme. In some instances they may not be deemed appropriate for more aesthetic design reasons.

Complementary Measures – Buildings

6.45. Buildings may be used to form an end-stop to a straight stretch of road, or be angled indicating a change of direction.

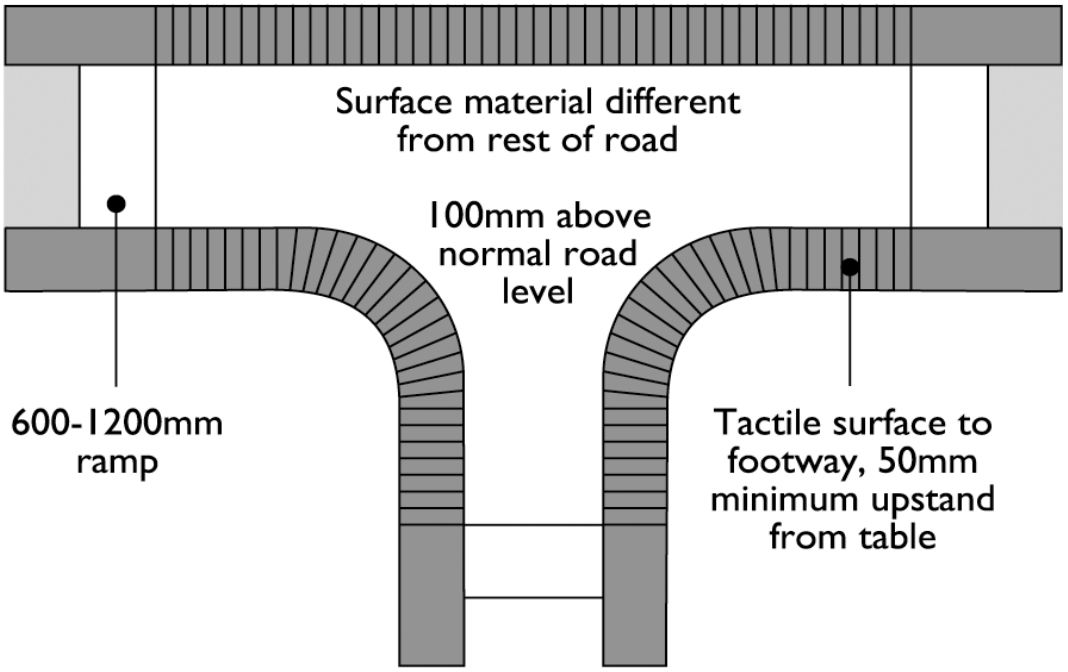


Table Junction

Complementary Measures - Width and Alignment

6.46. In addition to the measures described under changes in Horizontal Alignment above, general variation in the width and alignment of the carriageway can make the driver feel less secure and less able to increase speed. The intention should be to make the driver feel that he is in 'a place' rather than 'on a road'.

Miscellaneous Design Features

Turning Areas

6.47. Well-connected streets generally, do not require turning areas but where there are *culs-de-sac* a turning area will be required. Consideration will need to be given to the effect of vehicles parking in such an area negating its function. This could be overcome by providing adequate parking elsewhere or incorporating parking into the turning area itself. There is no prescribed shape for the turning area but vehicle tracking plots will be required to ensure that vehicles can use it.

Vertical Clearance

6.48. In general a vertical clearance of 5.0m is required over the full carriageway width and a 500mm margin at either side. If the carriageway has a cross-fall of greater than 2.5% then the 'low side' margin should be increased to 610mm.

Horizontal Clearances

6.49. A horizontal clearance from the carriageway edge of 500mm shall be maintained to all structures/signs/street furniture etc. This shall be increased to 610mm on the low side if the carriageway has a cross-fall > 2.5%.

Gradients / Vertical Curve

6.50. Where a change in gradient occurs, vertical curves will be required at both summits and valleys for driving comfort, and at summits to ensure forward visibility to the following standards, measured from a drivers eye height of 1.05m and object height of 600mm:- 20mph (30kph) zones : 25m.

***Culs-de-sac* and Potential for Future Development**

6.51. Where a cul-de-sac abuts an area, which can be foreseen as a site for future development, the *cul-de-sac* (and if necessary the network serving it) should be designed to be capable of serving the future dwelling numbers.

Bollards

6.52. Bollards used to protect buildings and demarcate footways etc. in parking squares should be approximately 1.2m high.

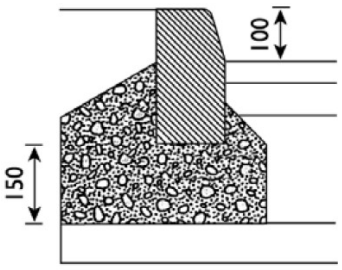
6.53. The materials and pattern, on any individual site, should be discussed with the Local Planning Authority and Highway Authority representatives as material / colour / pattern pallets will differ District, by District and even village to village.

6.54. Collapsible bollards will be required in certain locations, such as pedestrian/cycle links for maintenance purposes and emergency access.

Kerbs

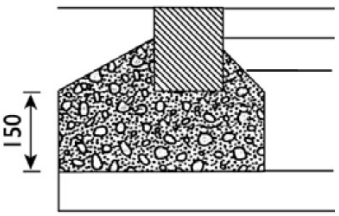
6.55. The design of kerbs, channels etc. should complement the design speed and character of the road. Precise details of materials options, form and colours appear in the specification included in this document and consultation will be needed with the Local Planning Authority and Highway Authority representatives to define what is appropriate on any individual site.

6.56. The following diagrams illustrate some standard details of constructions, whatever kerb detail is selected; at least half of the height of the module should be below ground level in order to prevent displacement by traffic over-riding.



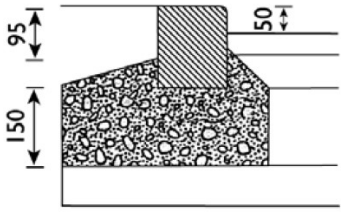
175 125 75

Upstand kerb to road
Types 1, 2a &2b



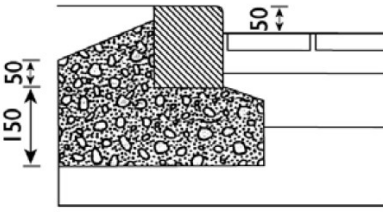
175 125 75

Dropped kerb



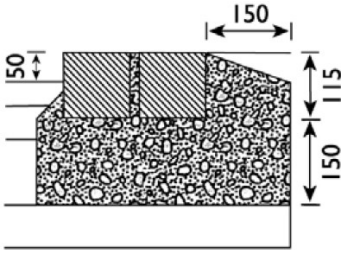
175 125 75

Suggested kerb treatment
on Type 3 roads

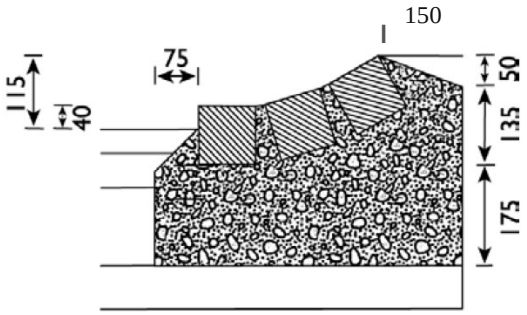


175 125 75

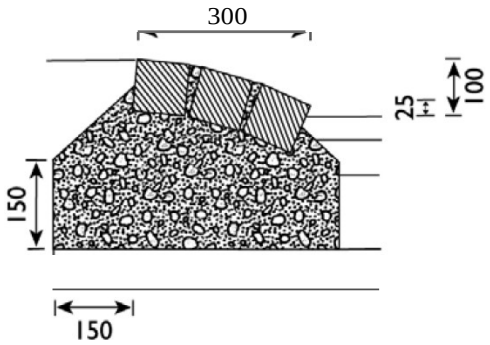
Edge detail with paviors



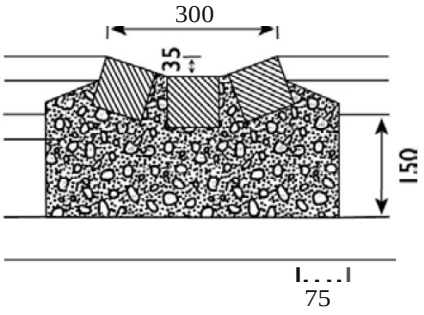
Granite sett kerb



Setts or engineering bricks



Suggeted kerb treatment on
Type 4 roads



Channel formed with setts

All dimensions in mm

PARKING

7. Parking & Parking Standards

7.1. It is now generally accepted that, while constraining parking provision at the journey destination (such as town centres) limits private vehicle trips, it is not necessarily the case at the journey origin (residential properties).

7.2. Residents will own cars and if necessary park them on streets where there are no parking controls. In doing so it often causes conflict and access problems. In recent years there has been a growing feeling that there is insufficient parking provided in new residential developments.

7.3. The National Planning Policy Framework (NPPF - 2012) Other Planning Policies: Parking states that adequate parking should be provided: "*both in new residential developments and around our town centres and high streets*"…"*the Government abolished national maximum parking standards in 2011*".

7.4. NPPF: Other Planning Policies goes on to say: "*Parking standards are covered in paragraph 39 of the [NPPF]… The following text now needs to be read alongside that paragraph*:

> ***Local Planning authorities should only impose local parking standards for residential and non-residential development where there is clear and compelling justification that it is necessary to manage their local road network.***"

7.5. Oxfordshire has locations, where management of the local road network are necessary. The OCC *Position Statement – on the Application of Contemporary Highway Design Guidance in Oxfordshire* makes clear that parking will be considered on its merits according to appraisal of supporting documentation submitted with applications. Such documentation includes: Design and Access Statements (D&AS), Transport Statements (TS) and Transport Assessments (TA).

7.6. An example of a special case relating to parking is **Houses of Multiple Occupation** (HMO) in Oxford (**Appendix 6**) and other Oxfordshire urban centres. The frontages of such buildings often have on-street parking for, at most, two cars and yet have a demand for well in excess of this as a consequence of being HMO.

7.7. The cumulative effect of this, where there are many HMOs in one street, can be to cause an excess of parking demand and potentially obstruction of the highway. To avoid this situation, objections to HMO conversion will be made, where it is felt that a compelling justification is found to need to manage parking in such contexts.

7.8. In other circumstances the following parking standards will, be used, as guidance only, for larger developments. Actual parking levels will be expected to be justified, as laid out in supporting documentation with planning applications, such as D&AS, TS and TA.

Parking Standards

7.9. Recommendations for parking levels for the different Districts are included in **Appendix 6**. These provide for recommendations for allocated and unallocated, as well as for visitors and operational needs. The element of unallocated parking is recommended to maximise flexibility and economy of land use. In some circumstances, parking can be accommodated entirely without allocated spaces.

7.10. **Allocated spaces** can be within the curtilage of a house, a private space within a parking court conveyed specifically to a flat or house, or a group of spaces owned by a third party where the spaces are leased to individuals.

7.11. **Unallocated spaces** are those, which can be generally used by anyone and where possible they should generally be provided off-street in parking courts. In this case it is strongly recommended that they are controlled by a third party, such as a management company on behalf of those who use the spaces. This way, whilst not being allocated to a specific property, they can be assigned to particular groups of houses or flats.

7.12. Parking spaces on a private road generally cannot be allocated to specific residents and the Highway Authority will ensure that suitable control and maintenance of the road is provided for, through the planning process.

7.13. On-street parking (whether adopted or private) can be controlled by Traffic Regulation Orders (TRO) to restrict vehicle type and or length of time of use, although this is not a preferred solution on new estates. If the surrounding area suffers parking problems then other means of controlling parking should be considered. Developers are encouraged to design the road and housing layout to create an effective self-controlling arrangement to reduce the need for traffic regulation orders.

7.14. The provision of **car clubs** within new developments can be part of an overall package of measures to reduce car ownership. A variation in parking standards may be appropriate where car clubs are introduced and secured for the long term.

7.15. When areas within residential development are being considered as '**car free**' or where reductions in car parking provision beyond levels required in these recommendations then the implications and remedies must be addressed in the Transport Assessment and Travel Plans, which will accompany the planning application. Care must be taken to ensure that cars are not parked on surrounding roads causing problems to existing residents or for highway safety.

7.16. When car parking spaces are being reduced to very low levels then consideration must be given to allow some spaces for people with **mobility difficulties**.

7.17. Parking for private, shared ownership and **rented dwellings** should be to the same standard with no identifiable distinction between the different tenures. This has the advantage that should tenures change there are unlikely to be parking difficulties.

Parking Design Considerations

7.18. The placing of parking spaces, within new residential areas, should be considered as an essential part of achieving a high quality urban design.

7.19. Developers are encouraged to design developments such that the carriageway widths, the road width and location of parking, both on and off street, avoid irresponsible parking and allow access for public service and emergency vehicles.

Parking Space Dimensions

7.20. The following tables show the minimum space sizes acceptable:

Perpendicular (e.g. driveways and parking courts)	**Length** (m)	**Width** (m)
Space for people with mobility difficulties	5.5	2.9 +
Standard space (unobstructed)	5.0	2.5
Standard space (obstructed on one side)	5.0	2.7
Standard space (obstructed on both sides, includes car ports and under-crofts)	5.0	2.9
Inside garage	6.0	3.0

Parallel (e.g. adjacent to streets and driveways)	**Length** (m)	**Width** (m)
Space for people with mobility difficulties	6.5	2.9 + 1.0
Standard space	6.0	2.5

Echelon Parking	**Permitted overhang** (m)	**Length** (m)	**Width** (m)
60^o	0.1	5.6	As above
45^o	0.2	5.3	As above
30^o	0.1	4.7	As above

Parking for People with Impaired Mobility

7.21. Consideration must be given in the design to the provision and location of spaces for impaired mobility people (Blue Badge Holders). Generally, the spaces should be within the curtilage of the property and have level access to the main pedestrian access. At the least, these parking spaces must be within 50m of the dwelling entrance (Blue Badge Holder estimated range).

7.22. Where developers are proposing to build flats with unallocated off-street parking and the level of mobility impaired residents is unknown then at least 5% of spaces should be designed and allocated for their use. They should be located near to the main pedestrian access to the building and have level access. Reference should be made to Department for Transport's *Inclusive Mobility* (2002) standards.

7.23. The bay should be marked with a British Standard Disabled Symbol to conform to BS 8300:2009. Further guidance can be obtained from Department for Transport Traffic Advisory leaflet 05/05.

7.24. Buildings specifically for the elderly or mobility-impaired people should comply with the relevant higher specific requirements and standards (as shown in the parking space dimension tables above).

Parking Space Layouts

7.25. A vehicle / pedestrian sight splay of 2m x 2m (back of highway to side of driveway) will normally be required where the parking space abuts the back of footway or highway boundary.

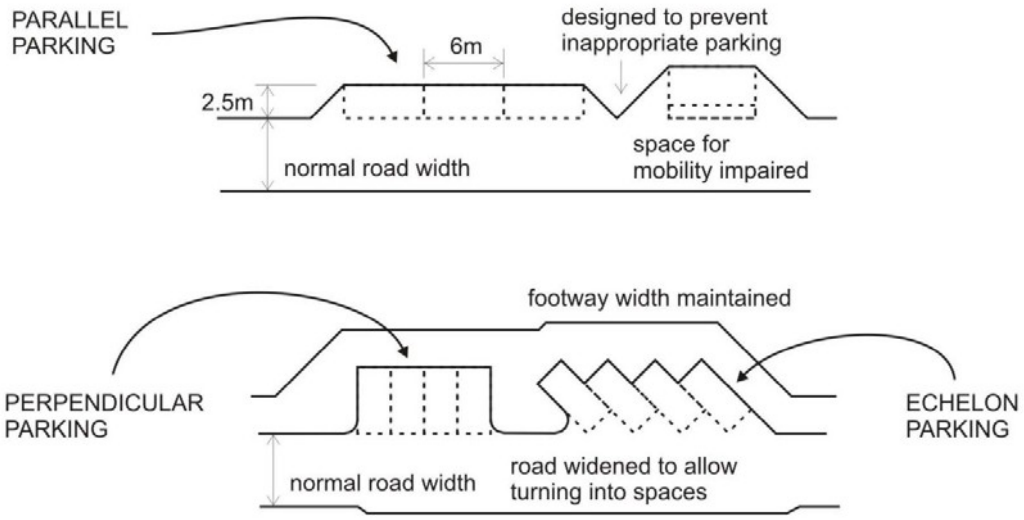
7.26. Parking bays, which are side-by-side allow car doors to be opened partly into the adjacent bay. Where parking spaces are adjacent to structures adequate room for pedestrian movement should be provided on one or both sides accordingly.

7.27. Tandem (in line) parking is inconvenient and generally must be avoided where possible, as both spaces are rarely used. It should not be used off-site, however, it may be appropriate on-plot if an additional vehicle parking on the highway would not have unacceptable consequences.

7.28. Where parking is to be provided on-street, parking bays adjacent to the general carriageway may be appropriate in certain cases but it should be broken up in maximum groups of about 4 spaces. This not only limits the visual impact but allows kerb build-outs to be provided for pedestrians to cross the street with minimum sight line obstruction.

7.29. Where lay-by parking is provided on street it should be constructed to carriageway standards. The parking bay should be differentiated from the carriageway preferably by change of surface treatment.

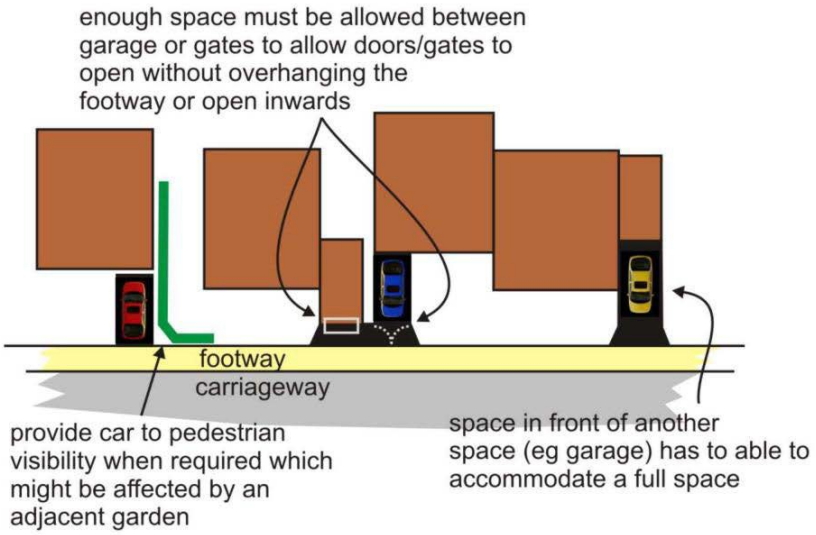
7.30. An indication of how parking spaces relate to the street are shown in the following figures:



7.31. Always sufficient space must be allowed to achieve a safe and appropriate approach for vehicles into a car parking space. A width of 6.0m to swing into a parking space and 7.3m to get into a garage must be provided for.

7.32. Where garages or gates into parking areas are constructed less than 5.0m from the back of the highway, a set-back from the back of the highway should be either 0.5m to allow for 'up and over' garage doors (0.0m if roller shutter or similar) or greater than 5.5m to allow for car parking in front of the garage or gates. Care should be taken as to where this approach is applied. On busier streets space should be allowed to provide space for a vehicle to rest temporarily whilst the gates or doors are being opened or closed.

7.33. Set out below are examples of off-street parking layout in relation to the footway. This arrangement will be required especially, where the footway and carriageway is to be adopted by the Highway Authority.



7.34. Variation to the above may be acceptable in certain circumstances but the onus is on the developer to provide supporting evidence.

Garages

7.35. Most family cars are about 2.0m wide and a minimum clearance of at least 0.5m each side is required to open car doors on both the driver and passenger side. An average car length is about 4.5m.

7.36. Research has indicated that about 50% of garages in Oxfordshire are not used for parking of vehicles but are used for storage or other purposes. This may be due to garage sizes being too small to accommodate most family cars and for storing bicycles and other domestic goods. To allow for some storage and/or cycle parking the garage size should reflect this (see Parking Space Dimensions above). Garages below these dimensions will not be counted as a parking space.

7.37. Where a garage is counted as a parking space it will be normal practice to place a planning condition to ensure its continued use for that purpose.

7.38. The garage doors must not open onto or over the adopted highway area, and vehicle/pedestrian sight splays apply as for the parking spaces.

7.39. Garage courts require a minimum of 7.3m between garage fronts. Adequate drainage must be provided for the paving in front of the garages.

7.40. The minimum entrance widths and headroom to garage courts are the same as for parking courts (shown below).

Car ports and Under-croft Parking

7.41. Car ports and under-croft parking areas are less likely to be used for purposes other than parking a vehicle. Car ports 5.0m long by 2.9m wide and greater will count as a parking space.

Parking Courts

7.42. Rear parking courts can reduce the visual intrusion of cars. But there are disadvantages including inefficient use of land, reduced garden sizes and loss of security and privacy to the rear of the home. *Car parking What Works Where* by English Partnerships states:

> "*The recent fashion for placing parking spaces behind buildings has led to many schemes around the country being blighted by cars parked to the front of the house where there is no space designed to accommodate them.*"

7.43. Careful consideration therefore needs to be given to the location and design of parking courts to minimise any adverse impact. A balance needs to be struck between on-street and on-plot parking.

7.44. Parking courts work best when they:

i. Have no more than about 10 spaces
ii. Have single point of access to the highway
iii. Are overlooked by living rooms or kitchens
iv. Have adequate lighting
v. Have boundary treatments to allow overlooking and avoid blank walls
vi. Have direct access to dwellings
vii. Are high quality in design terms - materials, planting etc
viii. Are located in accessible areas
ix. Have sense of place
x. Feel secure to users.

7.45. The entrance to parking courts should generally be a minimum width of 3.0m for up to 9 parking spaces and 4.1m wide for 10 or more spaces. Where the entrance to a parking area is built over, the headroom should be a minimum of 2.5m. Separate building regulations may apply where fire tender or emergency access is specifically required.

7.46. Parking squares in the appropriate setting can also be used as an alternative form of providing parking provision. Designs using 'Shared Surface' principles provide the opportunity to integrate parking within the street. However, Shared Surfaces need careful consideration to ensure parking does not occur outside designated parking areas, thereby, causing road safety problems and impairing the overall amenity of the development.

7.47. Shared Surfaces should generally be 6.0m wide for reasons of accommodating services, visual narrowing can be deployed to maintain low vehicular speeds.

7.48. Designers should be aware that on-street parking may cause problems for vehicles manoeuvring on the street, particularly where the carriageway width has been reduced as part of the overall design. The effect and implications of on-street parking must be considered in the layout design.

Minimising Parking on the Footway

7.49. Unplanned parking on roads and footways which causes obstruction to the passage of pedestrians, bicycles and vehicles (including service vehicles) tends to take place where planned parking provision is inadequate or less convenient. Adherence to the policies in this document should prevent this, but where less convenient forms of parking (tandem on-plot and rear parking courts) are proposed, developers will need to demonstrate that unacceptable, unplanned parking will not occur. Careful consideration will need to be given to road widths and designs that deter inappropriate parking.

7.50. Wide areas of footway or open space may also be attractive for casual parking. Bollards, planters or other street furniture can assist in the definition of parking areas and be used to indicate where people should park. However a compromise needs to be reached to avoid

street clutter.

STREETSCAPE

8. Services

8.1. The provision of public utilities services is an essential part of any development. The lay-out, economical installation and future maintenance of service apparatus must be considered in the design of an estate.

DEVELOPERS MUST ESTABLISH LIAISON WITH PUBLIC UTILITIES AS PART OF THE INITIAL DESIGN PROCESS.

Routeing of Services

8.2. **Public Utilities** have rights to lay apparatus in public highways and other public land. The New Roads and Street Works Act and other specific enactments stipulate these rights. Public Utilities prefer to maintain their rights by laying their services in land adopted by the Highway or local authority.

8.3. However, the highway and local authorities are not able to bear the cost of **maintaining** land solely to provide a service or public utilities and developers should cater for service space needs in highways, highway verges and other land acceptable to the highway or local authority.

8.4. **The highway authority** will adopt by agreement carriageways, footways, footpaths and verges, which are essentially or prospectively a public highway. This includes any length of street, highway, road, lane, footway, alley, passage, square, court, verge or piece of land, which satisfies the requirements of these standards.

8.5. The local authority may adopt by agreement public open space amenity and play areas, certain footpaths, linear parks, land laid out as a way and such other areas acceptable to them. The local authority are the 'Street Managers' of these areas within the terms of the 'New Roads and Street Works Act 1991 Section 48, 49(4)'.

8.6. If the adopted highway or public open spaces are insufficient for public utilities needs then developers must provide service routes with secure easements. It is the responsibility of the developer to agree easements with the public utilities concerned.

8.7. When selecting routes for services dual mains should normally be used to obviate the need for branch crossings, which weaken the carriageway structure. It is the developers' responsibility to provide ducts, as necessary in positions required by the public utilities and to mark temporarily the location of the ducts for easy access during construction, where crossing cannot be considered.

8.8. It is preferable for services to be laid in amenity areas, footpaths or service strips to minimise installation, repair costs and disruption. However, if no other route is possible then services may be sited in the carriageway.

8.9. In the case of shared surfaces where there is no footway care needs to be taken to group services so that excavation for maintenance does not block the street. Where a delineated pedestrian margin is provided, this is the correct location for underground services.

8.10. The National Joint Utilities Groups (NJUG's) publication: *NJUG Guidelines on the Positioning of Underground Apparatus for New Development Sites*, 2007 indicates the manner, in which, services can be accommodated in footways of 2m width – see: http://www.njug.org.uk/wp-content/uploads/V2-New-Development-Sites-Issue-4-29-10-2013.pdf.

Co-ordination

8.11. The estate layout must reconcile the sometimes conflicting requirements of highway authority, public utilities and local authority always bearing in mind that the main objective of these standards is to create a better housing environment.

8.12. The emphasis on tight bends in road alignments to reduce speed, make roads safer and improve appearance, may conflict with the radii of pipework. Undulating mounding or banks in landscaped areas could cause problems since most services prefer to be at a consistent depth, therefore verges to contain services should ideally be level with the adjacent kerb.

8.13. Trees and shrubs in close proximity to public utilities' services should be avoided since their roots will cause damage and the trees, themselves will be damaged by access excavation - services should be at least 3 metres from new tree planting and outside the canopy of existing trees.

8.14. In addition, the layouts of the several services must be coordinated; the joint trench principle is an ideal, which is not often practicable. However, care must be taken to ensure that services do not conflict. Developers must provide the public utilities with their proposals at the earliest possible stage and designers must consider services as a basic design element.

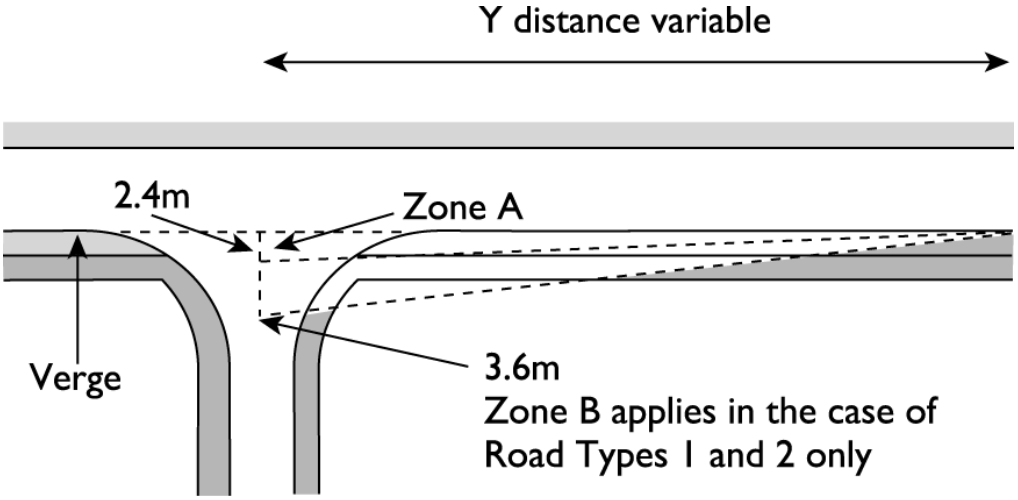
9. Landscaping

9.1. Before applying for planning permission the wishes of the **Local Planning Authority** (LPA) with regard to landscape design and retention of existing landscape features should be ascertained. It is essential that an accurate tree and hedgerow survey be carried out in order to plot the position and condition of these features. The survey should include details of species, heights, condition, spread of the canopy and girth of all trees. Girth to be measured at a height of 1.0m above ground level.

9.2. The **retention** of landscape features of amenity value must be taken into account and therefore the preliminary design of residential access roads, footpaths and cycle-ways to serve the development should, as far as possible, be sympathetic with the LPA's wishes - for example if a visibility splay requires removal of a tree worthy of retention then the access should be re-sited if a safe alternative is available (although relaxation of the design standards set out in the road type descriptions may not always be possible).

9.3. **In residential areas the Highway Authority will normally only adopt the paved surfaces (carriageway, footways, footpaths and cycle-ways), and/or 3 metre verges either side which are essential to the functioning of the highway - this will include visibility splays.**

9.4. Planting within visibility splays should follow the principles set out in the following diagram and table.



Planting

Zone A

Existing Trees	Normally no trees permitted. However in exceptional cases trees may be retained. The final decision is to be made on site in consultation with the local highway and planning authorities.
New Trees	No trees permitted.
Ground Cover	Permitted providing the plants do not generally exceed 600mm in height when mature.

Zone B

Existing Trees	Trees may be retained. The final decision is to be made on site in consultation with the local highway and planning authorities.
New Trees	Trees may be permitted. The precise location will be agreed with the highway authority.
Ground Cover	As for Zone A.

9.5. All **new trees** should be of slender girth when mature and the trunk should be clear of side shoots/branches etc. to a height of 1.8m.

9.6. Grass may be used in visibility splays subject to the size of the area and a satisfactory layout for future maintenance.

9.7. Within forward visibility splays, ground cover to a height of 600mm is acceptable as an alternative to grass. Trees may be allowed in such areas subject to on site agreement with the Highway Authority.

9.8. Such planting will be the subject of a commuted lump sum for the future maintenance of the planted areas. Details of this payment will be provided by the Engineer after approval of any planting scheme.

9.9. See **Appendix 4**, for a schedule of suitable trees and shrubs for planting in the highway.

9.10. It is most important to design landscaped areas in such a way as to reduce to a minimum future maintenance costs. Designs should be simple and should avoid the use of small and isolated shrub beds, grass areas and split ownerships.

9.11. Where a higher standard of landscape design and maintenance is desirable (such as amenity grass cutting), the developer will need to reach agreement with the District Council for the area, to make provision for maintenance to such higher standards.

9.12. In all instances there will be a requirement for the developer to pay a commuted sum to cover future maintenance costs.

Retention of Existing Trees

9.13. The protection and preservation of trees should be one of the major factors taken into consideration when designing a layout, the development being carefully sited to retain as many of these as possible.

9.14. In deciding which trees will be retained, it is essential to consider their compatibility with the development - for example, it is not always the largest trees which are most suitable for retention - they can be less adaptable to change in site conditions, and the length of their useful life may often be less than that of some smaller, less impressive ones. Some trees with poisonous fruits or exceptionally large leaves might be undesirable in certain situations. Also, certain apparently sound trees can on further expert inspection prove to be potentially dangerous.

9.15. The minimum clearance between any existing tree and the edge of carriageway to new road construction shall be 1.0 metre. However, the Highway Authority reserves the right to refuse to allow retention where the tree would obstruct visibility, where root growth could damage carriageway or footway construction or drains, where the natural tree canopy could obstruct the passage of vehicles, or visibility impaired people, or where there is a tendency to branch fall which could cause damage to vehicles.

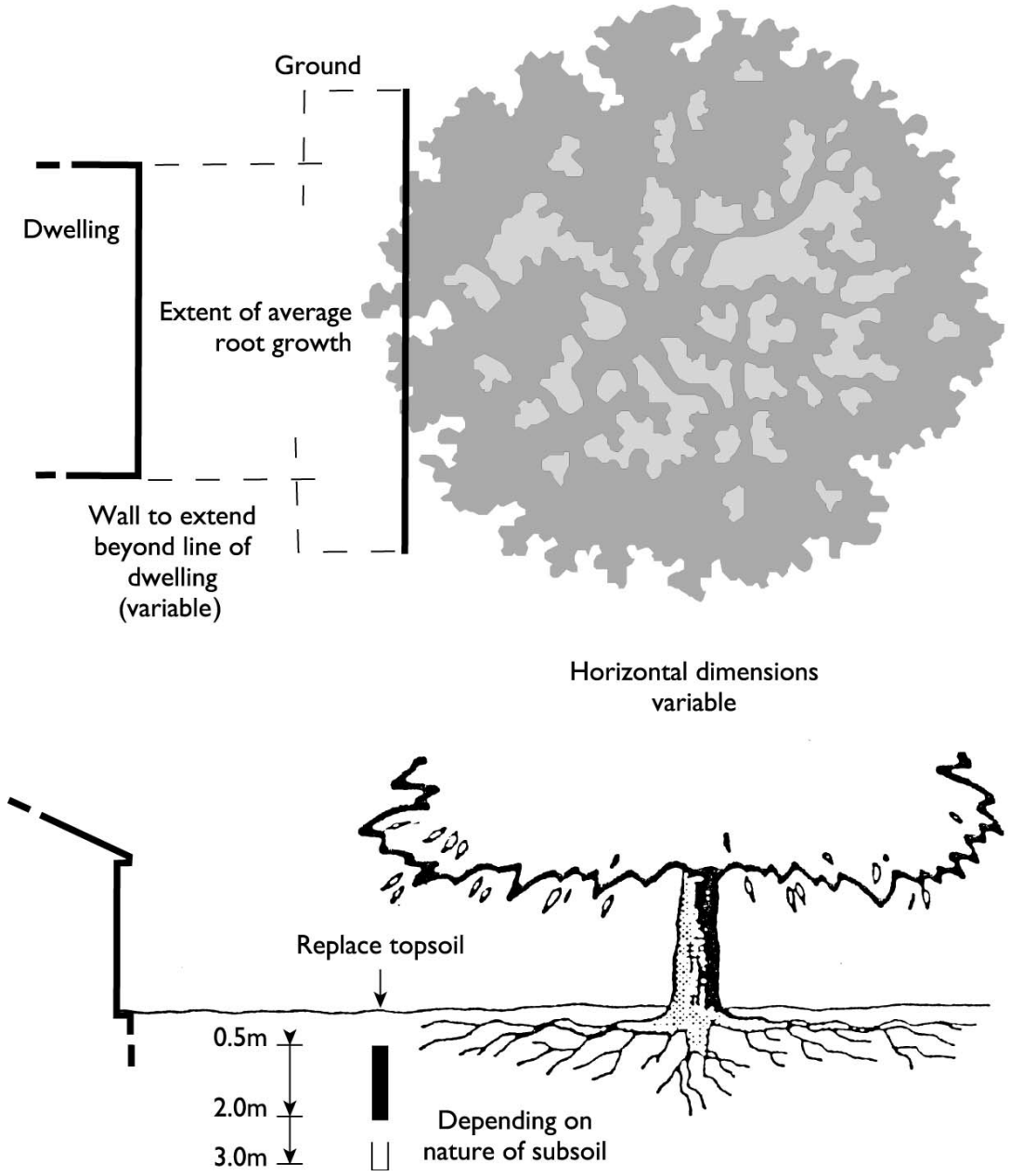
9.16. Retention of existing trees within potential highway will be subject to their having sufficient future life expectancy and could involve the payment of a commuted sum to cover future maintenance costs. The County Council's Landscape and Environment Officer should be consulted in all such cases.

Root Protection & Ground Wall Arrangements

9.17. Ground walls should be provided where a building is within a distance, less than twice the potential tree canopy of any tree.

9.18. Any queries regarding root protection for buildings should be referred to the relevant District Council's Tree Officers. For advice on root protection for verges/footways and carriageways/structures refer to the County Council's Landscape and Environment Officer.

9.19. Notes: Depth of wall below surface to be determined by the composition of the sub-soil. Width of trench and thickness of wall should be that of the narrowest available excavator bucket. The length of wall depends upon the width of the property to be produced and the location of the tree. If situated towards a corner, the wall may be angular in plan. The distance of the wall from the property depends upon the space available and the location of drains, services, etc., and it is best sited just beyond the range of feeder roots or the edge of the canopy overhang.



9.20. **All landscaping proposals in potentially adoptable highway MUST be approved by the County Council's Landscape and Environment Officer**

10. Conservation Areas

10.1. The Highways Authority will actively pursue and consider special treatment in and around conservation areas.

10.2. The duty placed on Local Planning Authorities to preserve or enhance the special character or appearance of conservation areas means that the necessity to "conserve" and enhance the character of the buildings in conservation areas is implicit in any new development within or adjacent to a conservation area. In such development special attention should be paid not only to the compatibility of new buildings with old but also to the scale and variety of spaces, which the buildings create.

10.3. Materials and details vary from place to place and these are elements of the character worthy of preservation. Designs should try to reflect traditional treatment in their proposals.

10.4. In order to achieve sympathy with developments related to conservation areas, the following non-standard proposals may be approved by the Highway Authority.

i. Reduced road widths over short distances
ii. Wider roads
iii. Reduced centre-line and junction kerb radii
iv. Reduced visibility splay requirements
v. Variation of footway/footpath widths
vi. Varied surface treatments and use of non-standard materials in both carriageways and
vii. footway/footpaths (see **Appendix 5**)
viii. Non-standard kerb details, e.g. stepped footpaths etc.
ix. Street lighting using wall brackets mounted on buildings etc.
x. Reduced x height signage.

10.5. Each conservation area has its own special character or appearance so proposals for special treatment must be considered individually, and will only be approved after consultation with both the Highway and Planning Authorities.

ADOPTIONS & THE HIGHWAYS ACT

11. Preamble to Adoptions

11.1. This section outlines our procedure for the transfer of responsibility for maintaining new residential roads to us from the developer. It also outlines the need for **Health and Safety** requirements during construction. Additional information regarding procedures is given in Chapter 14.

11.2. This preamble contains useful information regarding the Advance Payment Code, Section 38 Agreements, along with a notice on Health and Safety at Work.

11.3. This document should be read in conjunction with the following:

i. The rest of this Residential Road Design Guide.
ii. The Code of Practice for opening and Reinstatement of Trenches.
iii. Section 38 Agreement.

Drainage

11.4. The requirements of the drainage authorities in respect of public foul and surface water sewers do not fall within the scope of this document and should be ascertained from the Water Utilities. See **Appendix 1**.

11.5. Developers should, therefore, contact the County Council or, on all matters related to Section 38 designs, specifications and negotiation. Preferably contact should be made during the planning process so allowing work to commence without delay following planning approval.

11.6. The County Council or must be informed before any work is started. Preferably contact should be made during the securing of planning permission so allowing site works to commence without delay, see OCC Website for contact details.

11.7. Highway maintenance in the County is dealt with by the County Council through its Area Engineers. Licenses and notices for work to be carried out within highway limits can be obtained from or sent to the Area Office. See OCC Website for contact details.

11.8. The consent of the Highway Authority is necessary before any work or erection is commenced within, under or over an adopted highway. For all publicly maintainable highways, the Highway Authority's requirements for road openings and trench reinstatement shall apply. The appropriate S38 Engineer must be consulted regarding requirements.

Reinstatements

11.9. The Developer will be held responsible for reinstating road markings and all openings and carried out as a consequence of the works in the proposed highway, until such a time as the estate roads are adopted. The Developer of a prospectively maintainable highway shall notify the various utilities of their intention to elect to do the permanent reinstatement of the street which shall be carried out in accordance with the New Roads and Street Works Act 1991 'Specification for the Reinstatement of Openings in Highways'.

11.10. Any contractor or other individual etc. working either on, under, over or adjacent to the highway must indemnify the County Council against all losses and claims for injuries or damage to any person or property whatsoever which may arise out of or in consequence of the work in question.

11.11. All persons, companies wishing to undertake such work must demonstrate to the Highway Authority that adequate PUBLIC LIABILITY INSURANCE, with a minimum level of cover of £5m, is in force.

Health and Safety at Work - Important Notice to all Developers and their Contractors

11.12. A file must be produced as part of all Section 38 and 278 projects to keep information, likely to be significant for health and safety of future works need to be molded.

Contents of the Health and Safety File

11.13. When putting together the Health and Safety file, you should consider including information about each of the following. The level of detail should allow the likely risk to be identified and addressed by those carrying out the work.

i. A brief description of the works carried out
ii. Any residual hazards which remain and how they have been dealt with (e.g. surveys or other information concerning asbestos; contaminated land; water hearing strata; buried services etc.)
iii. Structural principles (e.g. bracing, sources of substantial stored energy, including pre or post tensioned members and safe working loads)
iv. Hazardous materials used (e.g. lead paint, pesticides, special coatings that need to be burnt off etc.)
v. Information regarding the removal or dismantling of installed plant and equipment (e.g. any special arrangements for lifting, order or other special instructions for dismantling etc.)
vi. Operational and maintenance manuals for any plant to be adopted to include Health and Safety information for cleaning (e.g. the means of safe access)
vii. The nature, location and markings of significant services, including underground cables, gas supply equipment, fine lighting services etc.
viii. Construction methods and materials if different from design
ix. Electronic copies of drawings used for construction
x. As constructed drawings (see As Constructed Drawings information sheet)

11.14. Health and Safety Files are to be sent electronically. This can be in CD form or via email/ drop box.

Advance Payments Code - Highways Act 1980 Section 219-20

11.15. These sections of the Highways Act set out the payments to be made by owners of land on which new buildings are constructed, in respect of street works, and the fines that could be levied should any works be carried out in contravention of Clause 219.1 of the Act.

11.16. The Highway Authority and its agents will apply these sections of the Act, note should therefore be taken of Clause 11.21 Procedure below.

Definition of 'Private Street'

11.17. Section 203 of the Highways Act 1980 defines a private street. Briefly this is a street not being a highway maintainable at the public expense and includes, for the purpose of the advance payments code any land shown as a proposed street on plans deposited either under building regulations or for planning permission.

Procedure

11.18. Within six weeks of building regulations permission being granted or acceptance of initial notice by the District Council, the County Council or the District Council acting on behalf of the County Council will serve a notice specifying the amount to be deposited or secured in respect of the street works charges for those dwellings for which permission has been granted. This figure will include charges for the provision of street lighting if appropriate, and is based on average cost figures supplied by the Highway Authority, which include service costs.

11.19. If the Highway Authority or its agents has served a notice, no work may be performed to erect the building (including foundations) until the sum specified in the notice has been deposited or otherwise secured to the satisfaction of the County Council or its agents.

Road Making Agreement

11.20. It is usual for Estate Developers to discharge their obligations under the Advance Payments Code by completing a Road Making Agreement with the County Council or their Agent Authority under the provisions of Section 38 of the Highways Act 1980. Even though it is proposed to complete such an agreement, it is still an offence to commence building works (including foundations) before the Agreement is sealed by both Developer and Bondsman. A Developer who wishes to start building before the Agreement is sealed should either:

i. Obtain a temporary bond from his Surety Company and lodge this with the Council before commencing building works.
ii. Deposit cash with the Council for those dwellings upon which he proposes to start work.

11.21. Where a notice has been served requiring deposits or security for road-works it is an **offence** to commence building works before the sum specified in the notice has been deposited or secured to the County Council's satisfaction and the owner of the land and any persons undertaking the work will be liable to a fine for each offence. Work carried out on different buildings will constitute a separate offence as will work carried out on the same building at different times.

Notes on Highways Act 1980 Section 38 (Road Agreements) - Procedure

11.22. Where an Estate Developer wishes to complete an Agreement for the site, under the provisions of Section 38 of the Highways Act, 1980 and when detailed planning consent has been granted, he should apply to the County Council or appropriate District Council (see contact details at Appendix 7) AS SOON AS POSSIBLE.

11.23. The Section 38 Agreement will not cover foul sewers or grassed or planted amenity areas outside the highway. These may be the subject of separate Agreements about, which the District Councils should be consulted.

Application for Section 38 Agreement: SUBMISSION REQUIREMENTS

11.24. If you are intending to submit an application for a S38 Agreement you will need to make sure the following items and information is supplied in the submission, if any of the items or information are not been supplied then the submission will not be allocated to an officer.

i. A cheque made payable to OCC for £1,500.00
ii. Name and address of Developer
iii. Name and address of anybody else with an interest in the land
iv. Name and address of Developer's Solicitor
v. Name and address of proposed Bondsman
vi. Copy of the Land Registry title for the development area
vii. Copy of the planning approval (if planning approval has not been granted we will not be able to start the submission)
viii. Estimated cost of the works including services
ix. Estimated start date and programme to complete the works
x. Noise survey (see attached noise survey requirements)
xi. Stage 1 and 2 Road Safety Audit

Technical Submissions Section 38

11.25. One copy of each drawing to be provided in paper form as part of the submission)

i. Location plan
ii. General arrangement drawing
iii. A3 layout drawing at 1:1250 scale (required for land registry searches) with proposed adoption area outlined in red
iv. Adoptions layout drawing with adoption areas coloured up as follows:
    a. Brown – roads
    b. Grey – footway
    c. Green – grass and landscaping
    d. Blue – highway drainage (any easement for highway drainage to be coloured yellow)

e. Pink – works in the existing highway

v. Construction details drawing
vi. Cross sections drawing
vii. Longitudinal sections drawing
viii. Levels and Contours drawing for junctions
ix. Layout drawing showing all drainage and services strips
x. Drainage calculations and schedule
xi. Drainage construction details drawing
xii. Service layout drawing
xiii. Landscaping drawing
xiv. A copy of the proposed layout at 1:1250 scale
xv. Site and ground investigation reports

11.26. All drawings are required to be supplied on a disc

11.27. Our inspection fees are 9% of the total cost of the works – the £1,500 requested above is deducted from the 9% and is not additional.

11.28. Please Note – a Legal Cost undertaking will be required for the agreement, this is in addition to the inspection fees identified above.

Traffic Signs, Road Markings and Street Lighting

11.29. The County Council provides a comprehensive design service for these facilities and will deal directly with developers who seek to use this service. Early contact should be made to start this process. The County Council will make a charge for this service.

11.30. In the event you wish to carry out the design yourself (or via your consultant) then again contact should be made as above who will provide further specification details. (See also Street Lighting Design Requirements in **Appendix 2**).

Structures

11.31. Where the Developer is to erect any structure, other than manholes, inspection chambers, soakaways, headwalls and similar items, as part of the works, or where any structure is adjacent to an existing or proposed public highway and either supports or in any way affects the safety of users of the highway, all such structures shall be approved by the Highway Authority.

Culverts and Simple bridges

11.32. Details regarding culverts and simple bridges etc., can be found in Appendix 3 of this document.

As Constructed Drawings

11.33. On completion of the development, prior to adoption, the Developer shall supply the Engineer with 2 copies of 'As Constructed' layout drawings of the development, or if available, a digital copy along with the Health and Safety file.

Section 278 SUBMISSION REQUIREMENTS

11.34. If you are intending to submit drawings to conform to the Standard Conditions of a Section 278 Agreement you will need to ensure the following items and information is included in the submission.

i. A cheque made payable to OCC for £1,500.00
ii. Name & address of Developer
iii. Name & address of anybody else with an interest in the land
iv. Name & address of Developer's Solicitor
v. Copy of the planning application or approval
vi. Estimated cost of the works including services

vii. Estimated start date and time to complete the works

viii. Location plan
ix. A program of the works
x. A copy of the landscaping drawing
xi. A copy of the proposed layout at 1:1250 scale
xii. Six copies of the Works drawing – a drawing showing the area of the works, outlined in red
xiii. Six copies of the Land dedication drawing – the area of land outside the existing Highway that will dedicated (colored pink)
xiv. Two copies of the Safety Audit (usually stage 2 with a technical submission)

Technical Submissions S278

11.35. Two copies of each of the following:

i. Typical cross sections
ii. Longitudinal sections
iii. Contoured drawing for junctions
iv. Layout drawing showing all drainage and services strips
v. Typical drainage details
vi. Noise survey may be required (see information sheet on Noise)

11.36. All drawings, should also be supplied on a CD-ROM disc.

11.37. Our inspection fees are 9% of the total cost of the works – the £1,500 requested above is deducted from the 9% and is not additional.

11.38. Please Note – a Legal cost undertaking will be required for the agreement, this is in addition to the inspection fees identified above.

12. Conditions for Section 38 Highway Works

12.1. This section outlines the conditions of contract for works, which involve transfer of responsibility for roads in residential development from the developer to the County Council.

12.2. **Definitions and Preliminaries**

i. The 'Engineer' means the Director of Environmental Services, Oxfordshire County Council, or its agent.
ii. The 'Engineer's Representative' means a person being the assistant of the Engineer appointed from time to time to perform the function set forth in Clause 2.
iii. The 'Developer' means the person or persons, firm or company whose proposals for the development and construction on the site have been approved by the Planning Authority, and shall include his agents, assigns and successors.
iv. The 'Works' means the work to be constructed, completed and maintained in accordance with the Conditions, Drawings and Specification.
v. The 'Specification' means the specification attached hereto.
vi. The 'Design' means the design drawings prepared by the Developer and submitted to and approved by the Engineer in writing or incorporated into the Section 38 Agreement.
vii. The 'Site' means the lands and other places on under in or through which the Works are to be executed.

Engineer's Representative

12.3. The functions of the Engineer's representative are to watch and inspect the construction completion and maintenance of the Works. He shall have no authority to relieve the Developer of his duties or obligations.

Approved Drawings

12.4. The Developer must provide the Engineer with such copies of the Drawings prior to commencement of the Works as are required in Clause 11.28 of the preamble of this document.

Altered or Amended Drawings

12.5. Any subsequent alterations to the design shall be submitted in writing to the Engineer for his approval. The written consent of the Engineer must be obtained before any such alterations are incorporated in the Works. The Developer must deposit with the Engineer such copies of the altered or amended drawings as are requested.

Copy of Drawings and Specification to be Kept on Site

12.6. One copy of the Drawings, Conditions and Specification shall be kept on the site and the same shall at all reasonable times be available for inspection and use by the Engineer's Representative.

Work to be to satisfaction of Engineer

12.7. The Developer shall construct, complete and maintain the Works in strict accordance with the Drawings and Specification to the satisfaction of the Engineer, and shall comply with and adhere strictly to the Engineer's instructions and directions on any matter connected therewith. The Developer shall take instructions and directions only from the Engineer or the Engineer's Representative.

Supervision of Works

12.8. The Developer shall give or provide all necessary supervision during the execution of the Works and as long thereafter as the Engineer may consider necessary. Such supervision shall be given by sufficient persons having adequate knowledge of the operations to be carried out as may be requisite for the satisfactory construction of the Works.

Developer's Agent

12.9. The Developer or his authorised agent or representative shall be in full charge of the Works and shall receive on behalf of the Developer directions and instructions from the Engineer or the Engineer's Representative.

Setting Out

12.10. The Developer shall be responsible for the true and proper setting out of the Works and for the correctness of the position levels, dimensions and alignments of all parts of the Works. If any error shall appear or arise in the position levels dimensions or alignment of any part of the Works the Developer shall at his own cost rectify such error to the satisfaction of the Engineer. The Developer shall afford the Engineer every facility for checking the setting out but shall not be relieved of any of his responsibility for the correctness thereof.

Safety

12.11. The Developer shall throughout the progress of the Works provide and maintain, at his own cost all lights, guards, fencing, warning signs and watching where and when necessary or required by the Engineer or by any competent statutory or other authority for the protection of the Works or for the safety of the public or others. Explosives may only be used on the site if the written consent of the Engineer is secured.

Notices to Local and Statutory Authorities

12.12. The Developer shall ascertain and conform in all respects with the provisions to give notices and pay all fees required to be given or paid by any Act of Parliament and the Regulations and Bye-Laws of any local or other statutory authority in relation to the execution of the Works. Where any part of the Works will be constructed under, over or adjacent to any Public or Private Services which do not require diversion realignment or disturbance in any way connected with the execution of the Works, these shall be located and temporarily supported to the satisfaction of the persons, local or statutory authority, concerned.

Damage to Highways Property etc.

12.13. The Developer shall be responsible for any damage, which may arise out of, or in consequence of the construction and maintenance of the Works and all costs related thereto. The making good shall be to the satisfaction of the Engineer, person, local or statutory authority concerned. For the purposes of Section 59 of the Highways Act 1980, construction traffic will be classed as 'Extraordinary Traffic' on public highways. Prior to works commencing on site, photographs shall be taken by the Developer in the presence of the Engineer showing the conditions of the public highway adjacent to the site and a schedule of defects agreed.

Manhole covers, hydrants valve boxes etc.

12.14. Manhole covers, hydrants, valve boxes and similar apparatus must be raised or lowered as necessary to suit the levels of the new work. This work to be to the satisfaction of the Engineer, local or statutory authority concerned.

Interference with Traffic and Adjoining Properties

12.15. All operations necessary for the execution of the Works shall be carried out so as not to interfere unnecessarily or improperly with the public convenience or the access to or use or occupation of public roads and footpaths or to or of the properties affected by or adjacent to the Works.

Clearance of Site on Completion

12.16. On completion of the Works the Developer shall clear away and remove from the Site all constructional plant, surplus material and rubbish of any kind and leave the whole Site clean and in a workmanlike condition to the satisfaction of the Engineer. All surplus waste material

and rubbish removed from the site shall be disposed of in a tip licensed by the Waste Disposal Authority for the disposal of construction waste.

Quality of Workmanship and Materials

12.17. All materials and workmanship shall be in accordance with the Specification and Engineer's instructions and shall be subjected to such tests as the Engineer may direct at the place of manufacture or fabrication or on the Site or at the Highways Laboratory or other such NAMAS approved laboratory at the Developers own cost. The Developer shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality weight or quantity of materials used and shall supply samples of materials before incorporation in the Works for testing as may be selected and required by the Engineer.

Access to Site

12.18. The Engineer and any person authorised by him shall at all times have access to the Works and to the site and to all workshops and places where work is being prepared or from where materials manufactured articles and machinery are being obtained for the Works and the Developer shall afford every facility for and every assistance in obtaining such access.

Examination of Work Before Covering Up

12.19. No work shall be covered up or put out of view without the approval of the Engineer and the Developer shall afford full opportunity for the Engineer to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give two clear days' notice to the Engineer when such work is ready for examination.

Uncovering and Making Openings

12.20. The Developer shall uncover any part or parts of the Works or make openings in or through the same as the Engineer may from time to time direct provided such direction is not unreasonable and shall reinstate and make good such part or parts to the satisfaction of the Engineer all at his own cost.

Removal of Improper Work and Materials

12.21. The Engineer shall during the excavation and maintenance of the Works have power to order the removal from Site of any materials which in the opinion of the Engineer are not in accordance with the Specification, the substitution of proper and suitable materials and the removal and proper re-execution of any work which in respect of materials or workmanship is not in the opinion of the Engineer in accordance with the Specification.

Notice of Commencement of Works and Specific Operations

12.22. The Developer shall give a minimum of 14 days' notice in writing to the Engineer that the Works are to be commenced. After commencement of the Works, should no work be carried out for more than 7 days, the Developer shall give a minimum of 48 hours' notice in writing to the Engineer of the intended recommencement. In addition, the Developer shall give 48 hours verbal notice to the Engineer of his intention to carry out the following operations, to facilitate sampling of materials - laying sub-base, road base, binder course, kerbs, laying highway drains and surface course.

Entrance Bell-mouth to be Completed

12.23. Before any construction work is commenced on site, the junction of any new estate road with the existing highway is to be completed up to binder course level, including footways and any necessary clearance of hedgerows etc., to provide the vision splays required by the planning consent.

Occupation

12.24. Before occupation of any dwelling where a service verge is provided in place of a footway, the verge shall be turfed and any highway boundary marker blocks required by the Engineer shall be placed in position.

Completion of Works

12.25. On completion of the Works, including street lighting, the Developer shall request that the Engineer certifies in writing that the Works are complete to his satisfaction.

Period of Maintenance

12.26. For a period of 12 months from the date on which the Engineer certifies in writing that the Works are complete, the Developer shall execute all work necessary to maintain the Works in good repair including sweeping, cleansing and street lighting and execute all repairs as directed from time to time by the Engineer. All costs incurred shall be at the Developer's expense. Notwithstanding the foregoing, the lighting authority shall be responsible for the routine inspection of street lighting and the energy costs incurred shall be at the lighting authority's expense.

Reinstatement of Surfaces

12.27. Where the surface of any carriageway, footway, verge or turfed area of any kind has been disturbed during the execution or maintenance of the Works the same shall be fully reinstated with similar materials in such widths and thickness as the Engineer and person/persons of local authority concerned shall require.

Variations

12.28. The Engineer shall have power to order any variation to any part of the Works that may in his opinion be necessary for the completion of the Works. Such variations may include additions, omissions, substitutions, alterations, changes in quality from character, kind position dimension level or line and changes in the specified sequence method or timing of construction.

Urgent Repairs

12.29. If by any reason during the execution of the Works or the period of Maintenance any remedial or other work shall in the opinion of the Engineer, be urgently necessary and the Developer is unable or unwilling at once to do such work, the Engineer may by his own or other workmen do such work as the Engineer considers necessary. All costs and charges properly incurred by the Engineer in so doing shall on demand be paid by the Developer to the Engineer.

Adoption

12.30. Provided always the Developer shall carry out all such works of repair amendment reconstruction rectification and make good any such defects, imperfections, shrinkages and other faults as the Engineer considers necessary. The Engineer towards the end of the maintenance period shall arrange for an inspection of the works to be carried out. This inspection shall be attended by the Engineer, the Developer and a member of the Highway Authority headquarters staff.

Emergency Services

12.31. The Developer shall provide and maintain access throughout the site of the Works for Emergency Services and shall provide facilities and assistance during an emergency. Fire hydrants, valves, surface boxes and indicator posts shall at no time be covered or obscured by materials or excavated spoil.

Water Supply

12.32. The Developer shall supply and maintain for all purposes an adequate water supply and shall make arrangements with and comply with the requirement of the appropriate Water Utilities.

Storage of Materials

12.33. Materials for use, on the Site, shall not be stored on the carriageway and turning spaces shall not be obstructed by materials or mixing plant. No mortar or concrete shall be mixed on any carriageway or footway surface or washed down any gully.

Trees and Shrubs

12.34. Trees, shrubs and ground cover planting within the highway verges and vision splays will only be permitted after written approval of the Engineer. Such planting will be the subject of a commuted lump sum for the future maintenance of the planted area. Details of the payment will be provided when requested. **Appendix 4** of the Guide gives a schedule of suitable trees and shrubs acceptable to the Highway Authority.

13. The Adoption of Highways, Public Open Spaces and Parking Spaces

Adoption of Highways

13.1. Developers should consult the relevant officer at an early stage, as appropriate in the planning negotiations. The Drainage Authorities' requirements in respect of public foul and surface water sewers do not fall within the scope of this document and should be ascertained from the Water Authority. Where non highway sewers are positioned within the highway, the relevant agreement with the water authority must be entered into before adoption of the road can occur.

13.2. The Advance Payments Code (APC) of the Highways Act 1980 (Section 219 - 225) is in force in the County. The effect of the Code is to require financial security from the developer to offset the frontager's liability for private street works. This security may be in the form of a cash deposit or a bond under Section 38 of the Act.

13.3. It is intended that roads, footpaths and cycle-ways forming the primary means of access to all housing developments should become publicly maintainable highways upon satisfactory completion of the works. It is therefore expected that developers will make an agreement with the Council under Section 38 of the Highways Act 1980.

13.4. In the event that the Developer wishes for his estate roads to remain private this information should be given to the Highways Authority representatives during the securing of planning permission. In order to secure exemption from the APC procedure a 'Private Road Agreement' must be entered into with the Highway Authority to protect the interests of prospective frontagers.

13.5. In deciding which areas are to become publicly maintainable highways, the following general principles will be adhered to:

i. All roads and footpaths, which are necessary for public access are adoptable (unnecessary duplication of paths should be avoided).

ii. Visibility splays in full and verges up to 3.0 metres in width, contiguous with carriageways and necessary for the proper and safe use of the highways are adoptable. (Any planting in such areas is subject to Highway Authority approval).

iii. Separation areas between carriageways and footways, where required, up to 3 metres width, are adoptable.

iv. Lay-bys and turning areas are adoptable (not private driveways or garage courts), and casual parking areas contiguous with the highway (by agreement).

v. Highway drainage - see "Highway Drainage" and "Highway Drainage – Design Guide" at **Appendix 1** for further information.

vi. Items of sculpture and other features will be permitted within the highway subject to the written approval of the Director of Environmental Services. Maintenance liability may be vested with the appropriate District or Town/Parish Council or the County Council - but in each case a commuted payment to cover the cost of future maintenance will be required. The Highway Authority will need to approve all features involving planting/landscaping.

Public Open Space

13.6. Amenity areas, play space and landscaped areas may be adopted by the District Council, Town or Parish Council as appropriate, the developer should contact the District Engineer or Technical Officer at an early stage to enable arrangements for any such adoption to be finalised during the planning process.

13.7. Areas of soft landscaping, other than as specified in 2 above, are not acceptable for adoption as highway.

Parking Places

13.8. Private parking provision must be met other than on the highway. Parking spaces provided in lieu of garages or private drives for the regular parking of residents' cars, which are integrated with the carriageway can be adopted subject to a commuted lump sum payment for future maintenance.

13.9. The developer should endeavour to provide parking spaces or garages within the curtilage of the site where possible.

13.10. Communal visitors parking spaces adjacent to and contiguous with the highway and which are clearly not for regular use of any specific dwelling may be adopted by the Highway Authority by agreement. These parking areas will incur additional maintenance contributions.

Signs

13.11. The developer will be responsible for providing traffic signs (regulatory and informatory), road name plates and carriageway markings in accordance with the current Traffic Signs Regulations and General Directions and the details set out below. Road name plates will incorporate traffic regulations fig. 816.1 (*cul-de-sac* sign, where appropriate) modified to the size of road plate. The District Councils are the street naming/numbering Authority and they should be consulted re: road name-plates.

13.12. Where the proposed development involves the formation of a new junction with an existing highway the signing proposals for the new development will be deemed to include all those signs and carriageway markings necessary to guide traffic to and from the development *via* the new junction arrangements.

13.13. The design of signing schemes for all new development may be carried out at the developer's expense by the Director of Environmental Services as part of the Section 38 agreement or alternative procedures.

Street Lighting

13.14. Street lighting where required, will in most cases be adopted by the Highway Authority or Parish Council and schemes may be designed by the Director of Environmental Services, at the developer's expense as part of the Section 38 agreement or alternative procedures.

13.15. See preamble to Specification and 'Street Lighting Design Requirement's in **Appendix 2** and also the 'Procedures' section for further information.

Other Street Furniture

13.16. All other street furniture and signs such as pedestrian barriers, bollards and the like which are required by the Highway Authority must be indicated on submitted plans and early advice should be sought from the Highway Authority on the detailed specification requirements for street furniture.

13.17. In all cases the actual layout of the development and its projected usage will determine the detailed lighting and signing.

14. Development Management Processes

Development Briefs

14.1. When **appropriate** and more generally for larger developments, guidance on highway and transport matters may be included in a **development brief**.

14.2. The matters covered may include:

i. The identification of any committed local highway or public transport schemes, which it may be appropriate to take into account;
ii. The general form of the roads infrastructure and site access arrangements;
iii. Any required capacity or safety improvements to the local highway network;
iv. The public transport requirements;
v. The facilities required for pedestrians, cyclists and the mobility impaired, and
vi. The requirements for public rights of way crossing or abutting the site.

Pre-Planning Application Discussion

14.3. Applicants and developers are encouraged to seek advice, about the implications of their proposals for transport purposes, from the Highway and Local Planning Authorities prior to submitting a planning application for a new development.

14.4. At the present time, the County Council provides Transport advice to all of the District Councils and developers within Oxfordshire either through Area Liaison Officers based in the County Council's Area Offices or from the Transport Development Control Group based at Speedwell House, Speedwell Street, Oxford.

14.5. When pre-submission advice is offered or given, then this will generally be on a 'without prejudice' basis, and it may be necessary to review advice as development proposals are advanced, or when national or other local guidance is reviewed.

14.6. When pre-submission advice is offered or given in the form of estimated costs for highway improvements to enable developments to proceed, then, again, this will be on a 'without prejudice' basis, and it is a matter for the applicant or developer to independently verify any such estimates and subsequently agree any revisions with the relevant authority.

Formal Consultations

14.7. Most planning applications for the developments covered by this guidance will be submitted to the City Council or the relevant District Council, as the Local Planning Authority. There may be, however, a few occasions where an application is required to be submitted to the County Council as Planning Authority (e.g. applications for the extraction of minerals and the deposition of materials).

14.8. Depending on the scale of the proposal, the Local Planning Authority will consult the County Council as Highway Authority.

14.9. In order that Transport advice may be given within the Statutory periods, defined in the General Development Order, applications for outline and full planning consent must include: A site plan to a minimum scale of 1:2,500, which should show:

i. The positions of all adjacent properties;
ii. The locations of the public highways from which the site is accessed or is proposed to be accessed, and all other highways, including public rights of way, which might be affected by the proposal;
iii. The land to which the application relates edged in red, and
iv. Any land within the same ownership edged blue.

14.10. The following should also be submitted, where matters relating to access are not being reserved at outline stage:

> *The extent and feasibility of site access proposals, including plans showing any necessary highway improvements and the impact these will have on the existing environment. The layout should be drawn, at a scale of not less than 1:1250 and should be accompanied by a longitudinal scale.*

14.11. Applications, including or submitted for the approval of engineering details should include a block plan to a scale of not less than 1:500 and plans showing the following details:

i. The existing ground form, trees, hedges and other natural or man-made features of the site and immediate surroundings;
ii. The position, width and geometric layout of all existing accesses;
iii. The position, width and gradient of all proposed accesses to the site and associated works within the limits of or affecting the public highway;
iv. The layout and vertical alignment of all new estate roads, surface water and foul drainage systems and their outfalls;
v. The identification by notation of all roads, where a shared pedestrian and vehicle surface is to be provided, or any road, which is proposed as a designated bus route;
vi. The locations and extent of all landscaping;
vii. The locations of all other features such as bus stops, shelters and other street furniture, and
viii. Proposals for any utility sub-stations or other major apparatus installation.

14.12. The details required for new estate roads are likely to include:

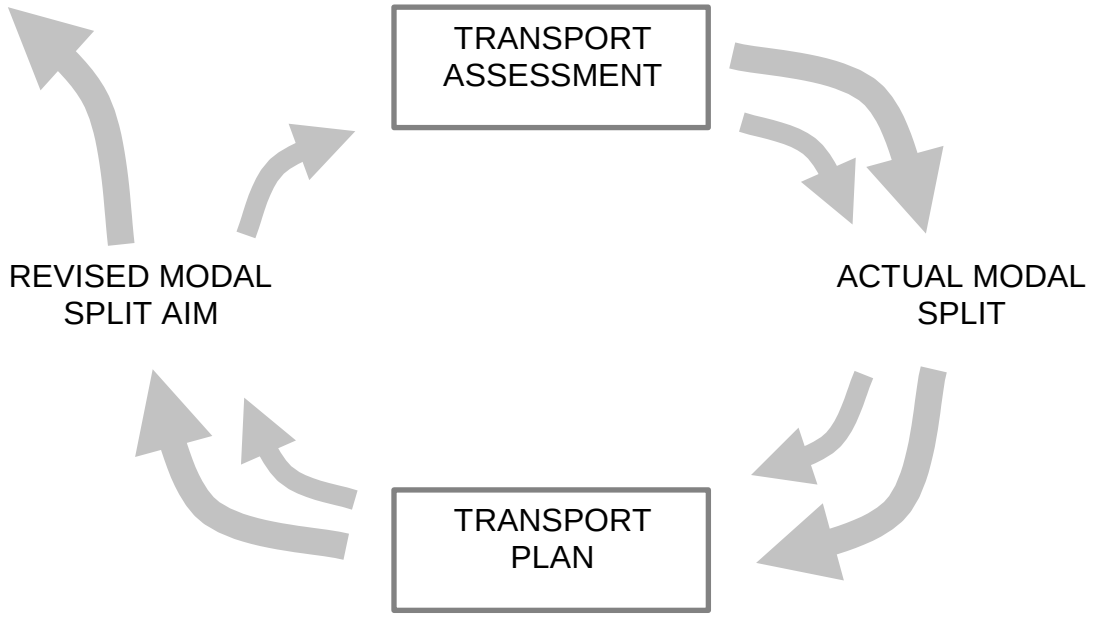
i. Longitudinal sections of new highways to a minimum horizontal scale of 1:500 and minimum vertical scale of 1:50, and cross sections, usually at every 15 metres, to a minimum scale of 1:1,000.
ii. The sections should show: the existing ground levels; proposed road levels; metreage and the full level and gradient details of proposed surface water and foul sewers.

14.13. **The following procedural issues are particularly important**. The Local Planning Authority must be kept informed about the progress of all negotiations between the developer and the Highway Authority regarding the resolution of any highway issues and any revisions to proposals resulting from such negotiations should be formally submitted to the Local Planning Authority as amended plans or additional information. The Highway Authority should be formally consulted with regard to any amended drawings or additional information affecting highway proposals even when the highway or transport impact is reduced from that, which was originally proposed by such amendments. Public participation and comment are important aspects of the planning system and, when appropriate, the Highway Authority will provide relevant highway and transport advice to the Local Planning Authority on matters that may arise from such participation or comment.

Transport Statements, Travel Plan Statements, Transport Assessments & Travel Plans

14.14. Relevant Transport Statement and Travel Statement or Transport Assessment and Travel Plan will be required to accompany planning applications (See Section on Website).

14.15. Applicants are advised that the submission of complete and accurate information will enable the matters relating to highways and transport to be dealt with expeditiously. Particular attention is, therefore, drawn to the guidance about Transport Assessments and Travel Plans, which will often be material to the planning considerations.



Contributions (section 106 of Town and Country Planning Act)

14.16. For the sake of clarification a contribution can mean a 100% contribution. Where other developments are dependent on a traffic management scheme being implemented or public transport being provided, then normally contributions will be apportioned equitably or proportionally. In some circumstances, contributions will be required in advance of the date of commencement of a development.

14.17. Through the formal consultation process the effect of a proposed development is assessed and the result will be used in determining the mitigation works, which are required to initially allow the development to be accommodated. However additional contributions may be required towards the wider provision of transportation improvements.

14.18. Appropriate funding will be secured by way of agreements, made under Section 106 of the Town and Country Planning Act 1990 for the following:

i. Any combination of transport scheme, initiative, or improvement which is either results in physical network changes or public service improvements,
ii. Implementing traffic management schemes including traffic calming along the existing highway;
iii. Undertaking traffic studies;
iv. The provision of public transport in the area affected by the proposed development and/or to serve the proposed development directly;
v. Improving accessibility by alternative modes of travel;
vi. Securing safer routes to schools;
vii. Implementation of travel plans;
viii. Contributions towards other justified highway and transport facilities which may need to be considered for inclusion from time to time, and
ix. Environmental mitigation measures arising from highway and transport requirements.

14.19. In some instances, the terms of a Section 106 agreement may result in the developer needing to enter into a separate Section 278 Highway Works or Section 184 agreement (Highways Act 1980) in order to advance a specific highway improvement or improvements at a particular time. The range of improvements may not only relate to traffic capacity and safety improvements but might also include for such things as the strengthening of access routes or the upgrading of existing highway drainage systems.

Highway Processes - Overview

14.20. Developers are advised that, whilst seeking planning consent or very soon after getting consent that contact is made with the County Council to establish the relevant procedures with respect of Advance Payment Codes, Private Road Agreements, and road agreements under sections 38 and 278 of the Highway Act.

14.21. When highways are constructed, as part of new developments, they can either become highway maintained at public expense or remain as private streets on completion of the works. Section 203 of the Highways Act 1980 defines a private street. This is a street not being a highway maintainable at the public expense and includes, for the purpose of the Advance Payments Code any land shown as a proposed street on plans deposited either under building regulations or for planning permission.

14.22. The Highway Authority has powers to ensure that all roads, both those intended to remain private and those intended to become adopted, are constructed to an appropriate standard under Section 219 of the Highways Act relating to Advance Payment Code. The Private Street Works part of the Highways Act very occasionally may be used by the Highway Authority to carry out works in private streets.

14.23. If the developer wishes the roads to be taken into Public Highway and maintained as such the Highway Authority has powers to adopt the roads as public highway under Section 38 of the Highways Act 1980. Where the developer wishes the roads to remain private the Highway Authority requires the developer to enter into a Private Road Agreement.

14.24. The Highway Authority (or its agent) is the only body with powers to carry out works on the public highway other than public utility companies who have separate powers. Where works are required on an existing highway the developer must enter into a legal agreement under section 278 of the 1980 Highways Act to allow the works to be undertaken.

14.25. Where an agreement under Section 38 of the Highways Act 1980 for the adoption of roads is being entered into, then Section 184 clauses will be included to cover the construction of the bell-mouth access or accesses within the public highway. If more extensive works are required within the existing public highway then a separate Section 278 Highway Works Agreement will be required.

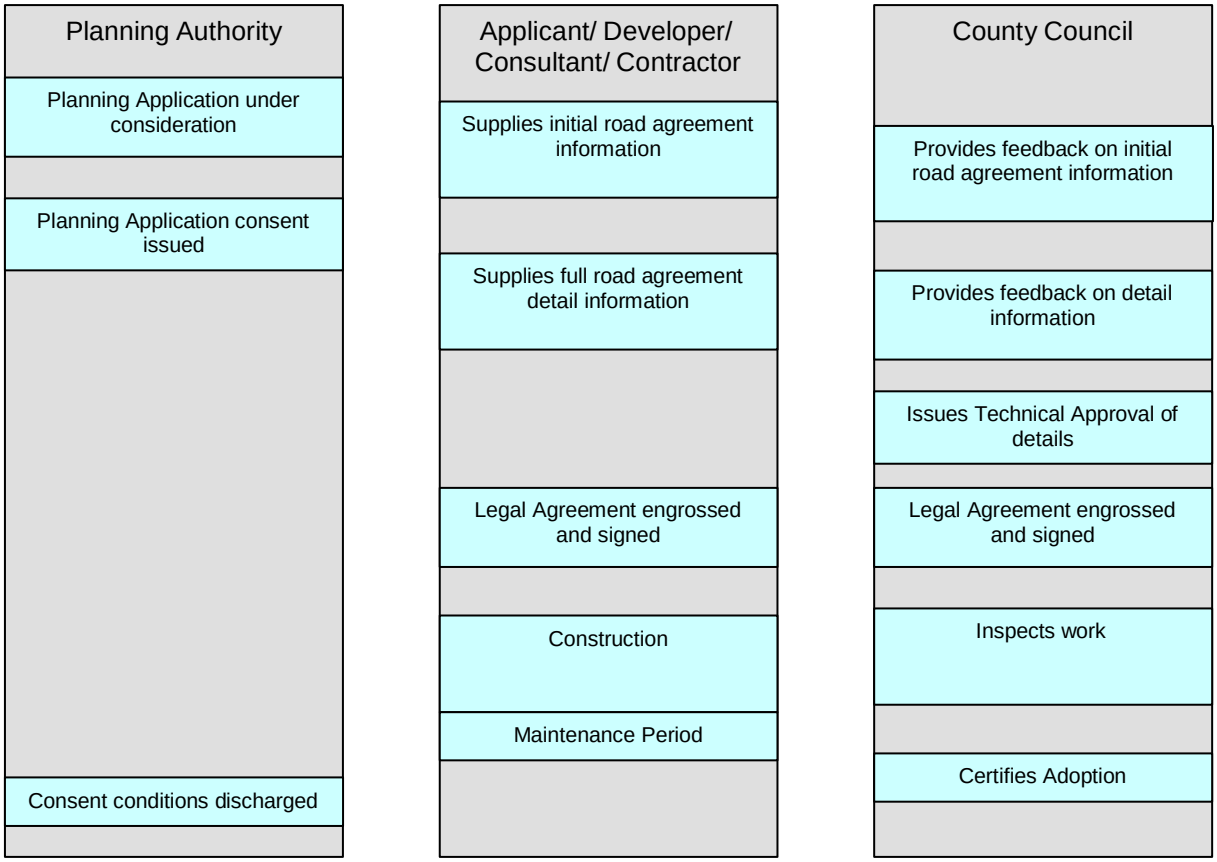
14.26. The developer is responsible for the design and construction of highway works related to the development, subject to the necessary approvals and agreements. The Highway Authority must approve the design and construction details and be allowed to inspect the works, as they proceed. On satisfactory completion the Highway Authority will adopt the areas subject to the agreement. It should be noted that there is a charge for the work involved by the County Council in checking and approving plans, and inspecting the works during construction.

14.27. The following elements are not included in the road agreements:

i. Foul water sewers and drains: refer to the local sewerage water disposal authority
ii. Some storm water sewers or drains which carry water other than water from the highway: refer to the local sewerage water disposal authority
iii. Grassed, landscaped, amenity or play areas not required for the provision of the highway area: refer to adjacent land owners or District Council

14.28. A fee is charged for the creation of the road agreements depending on the form of agreement. It may include the costs for administrating the agreement, legal charges, scheme design, technical approval, site inspection, safety audit, tendering and tender analyses, certification of works etc. and commuted sum payments for additional future additional maintenance costs.

Chart 1: General Road Agreement Swim-lines



Advance Payments Code

14.29. The Advance Payment Code procedure will be followed irrespective of the developers stated intentions regarding adoption or otherwise. Where a notice has been served requiring deposits or security for road works it is an offence to commence building works before the sum specified in the notice has been deposited or secured to the County Council's satisfaction. Also the owner of the land and any persons undertaking the work will be liable to a fine for each offence. Work carried out on different buildings will constitute a separate offence as will work carried out on the same building at different times.

14.30. The Advance Payments Code of the Highways Act 1980 (Section 219 - 225) is applied. The effect of the Code is to require financial security from the developer to offset the frontager's liability for private street works if required. This security may be in the form of a cash deposit or a bond. The County Council may call upon the security to complete the works if the developer defaults on his obligations.

14.31. It is intended that roads, footways, footpaths and cycle-ways forming the primary means of

access to all housing developments should become publicly maintainable highways upon

satisfactory completion of the works. The primary method for achieving this is by the applicant or developer entering into an agreement with the Council under Section 38 of the Highways Act 1980.

14.32. Within six weeks of building regulations permission being granted or acceptance of initial notice by the District Council, the County Council or the District Council acting on behalf of the County Council will serve a notice specifying the amount to be deposited or secured in respect of the street works charges for those dwellings for which permission has been granted. This figure will include charges for the provision of street lighting and drainage if appropriate, and is based on average cost figures supplied by the Highway Authority, which include service and administrative costs.

14.33. If the Highway Authority has served a notice, no work may be performed to erect the building (including foundations) until the security specified in the notice has been deposited or otherwise secured to the satisfaction of the County Council.

Private Road Agreements

14.34. In the event that the Developer wishes for the estate roads to remain private this information should be given to the Highways Authority representatives during the securing of planning permission. A 'Private Road Agreement' must be entered into with the Highway Authority to protect the interests of prospective frontagers. The agreement ensures that works are designed to an appropriate standard and secures monitoring of construction by the Local Highway Authority. A 'Private Road Agreement' will have the effect of providing an exemption under the terms of the Advanced Payment Code and hence a security will not be required.

Private Street Works Code

14.35. Under Section 203, Private Street Works Code, for the purposes of the Advance Payments Code, only those buildings which are proposed to be occupied shall be subject to the code. The code applies to any private access, street or road which serves commercial or domestic buildings and is not built to the Highway Authority's standards and specifications and hence is applied to build the access, street or road to its standards and specifications.

14.36. The Council as Highway Authority may invoke a Private Street Works action. However if an Advance Payments Code deposit exists then the majority of the frontagers can invoke a Private Street Works action. Actions under this legislation tend to be very lengthy and more expensive than other means of achieving the same result.

14.37. The Highway Authority wholly prefers to use all other means of creating new roads and streets by using road agreements under section 38 of the Highways Act.

Adoption of New Roads (agreement under section 38 of Highways Act)

14.38. Construction work for work potentially subject to a section 38 agreement should not be commenced until the content of the layout, design and specifications have been approved by the Council. Starting will be at the total risk of the developer. It is also recommended that the agreement is signed before works commence on the road works.

14.39. The Council will resist the carrying out of inspections of the works potentially subject to a section 38 agreement in the absence of real intent of the developer entering into that agreement. This intent is measured by the payment of the appropriate fees and the progress of producing technical drawings and specifications of the works.

14.40. The section 38 agreement cannot be signed until all relevant approvals have been issued by the Council, all appropriate security has been arranged, all fees paid, and technical approval

granted.

14.41. When a developer expresses a wish to enter into an agreement under section 38 of the Highways Act, it is still an offence to commence building works (including foundations) when the Advance Payments Code applies unless an appropriate security has been arranged. The signing of an agreement under section 38 of the Highways Act is an automatic exemption under the Advance Payments Code. The security arranged under the latter may be transferred however due to the vagaries of cost differences the value of the security can change.

14.42. The technical details and specifications must comply with all parts of the Council's design criteria and specifications. Drawing and details are submitted for approval by the Council. The agreement cannot be signed until all relevant approvals have been issued by the Council.

14.43. Working on existing highway (agreement under section 278, and notices under section 184 of the Highways Act).

14.44. Construction work will not be commenced until the section 278 agreement has been signed.

14.45. The agreement cannot be signed until all relevant approvals have been issued by the Council, all appropriate security has been arranged, all fees paid, and technical approval granted.

14.46. Improvements that will have a significant effect on the day-to-day operation of the public highway during, or subsequent to 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 the construction of a roundabout or right turn lane junction, or the installation of traffic signal control at a junction.

14.47. Improvements that will not have a significant effect on the day-to-day operation of the public highway will normally incorporate procedures under Section 184 of the Highways Act 1980 where an access to the site is required to be constructed or improved. An example of this might be the construction or improvement of a footway along an existing road leading to the site.

14.48. The technical details and specifications must comply with all parts of the Council's design criteria and specifications. Drawing and details are submitted for approval by the Council.

Technical Approval (road agreements)

14.49. The construction and specification detail of all road agreements require technical approval by the Council in order for the agreement to be signed.

14.50. The technical audit is carried out on:

i. Drawings (layout, design, geometry, signs, lines, and street furniture)
ii. Specifications (construction, materials and finishes)
iii. Signals (function, timing, specification and construction)
iv. Safety Audit
v. Traffic Regulation Orders
vi. Surface water disposal (design, construction, specifications, and easements)

Safety Audit & Quality Audits

14.51. The County Council applies a Safety Audit process to the design and construction processes for all new roads and changes to existing roads.

14.52. The Quality Audit approach is also encouraged.

14.53. The Road Traffic Act 1988 requires a Local Authority to take such measures as appear to the Authority to be appropriate to reduce the possibilities of accidents when new roads or changes to existing road layouts come into use. The purpose of a Safety Audit is, therefore, to ensure that highway schemes will operate as safely as practicable by the systematic checking against safety standards and for other potential hazards from the perspective of all road users including pedestrians, cyclists, the mobility impaired, and drivers.

14.54. **Stage 1 or Preliminary Safety Audit**: an overall audit on the general basic concepts of the proposals applied during the planning application stage.

14.55. **Stage 2**: a detail audit of the full technical construction and layout detail. Usually applied as part of the Technical Audit stage but can be required by the Council at the planning application stage.

14.56. **Stage 3**: an audit of the substantially complete works before the maintenance period commences. Any changes or recommendations will be carried out as part of the remedial works list and will have to be satisfactorily completed before adoption is declared.

14.57. **Stage 4**: an audit of the substantially complete works, under operational conditions applied immediately before adoption is declared.

14.58. The applicant or developer is to be responsible for the commissioning and consequent costs of all Safety Audits. All Safety Audits must be undertaken by an accredited Safety Audit team which is independent from the designers and approvers. The team must be technically competent, having specific experience and training in accident remedial work. CVs of all audit team members should be attached to every Safety Audit, and the Highway Authority reserve the right to refuse an audit carried out by a team in which a member does not conform to the qualification criteria.

14.59. All issues or potential risks, which are identified by the safety audit process must be addressed and rectified by the Developer. Where a Safety Audit identifies a departure from standards or another safety problem, and whether or not a suggested solution is proposed, the applicant or developer may request an exemption certificate. If a request for an exemption is agreed to then the formal certification will be issued by the Council as Highway Authority.

Traffic Regulation Orders

14.60. Planning conditions may, from time to time, be attached to consents requiring particular traffic management measures to be implemented prior to the commencement or occupation of the development. Such conditions are attached when the orders are required as a control or safety feature.

14.61. The provision of traffic regulation orders occurs by an independent statutory process. The County Council is unable to guarantee that any order will be confirmed once it has been advertised, especially if strong technical objections are raised. Hence the Council has to be sure that the Local Planning Authority is able to impose the relevant condition in the knowledge that there will be a reasonable prospect of it being implemented. To this end the applicant should undertake preliminary consultations with the Highway Authority; the police and emergency services, the relevant City, District, Town or Parish Councils, public transport operators, motorist organisations and other representative bodies which the County may advise as being appropriate. In the case when the traffic regulation is required on the grounds of maintaining safety then every attempt will be made by the Council to secure the order.

Securities, Inspections and Certification (road agreements)

14.62. A security is always required to accompany agreements under sections 38 and 278 of the Highways Act. The security is either a Bond or cash deposit.

14.63. Inspections are carried out by the Council, under the terms of the road agreements to ensure that the approved details are provided.

14.64. Any construction work, which does not comply with the approved details has to be rectified as set out by the terms of the agreement.

14.65. At certain stages of the construction the security is reduced to reflect the work satisfactorily completed.

Highway Structures

14.66. Where proposed new road works or changes to existing roads includes the erection of any structure, other than manholes, inspection chambers, soakaways, headwalls and similar items, as part of the works, or where any structure is adjacent to an existing or proposed public highway and either supports or in any way affects the safety of users of the highway, all such structures shall be given approval by the Highway Authority as part of the Technical Audit.

APPENDICES

A1. Highway Drainage

A1.1 A satisfactory system of drainage must be provided for the collection and disposal of surface water from all areas to be adopted by the Highway Authority in the development area.

A1.2 It is absolutely essential that the means of disposal of surface water be investigated with the Highway Authority at the preliminary stage of all development schemes. It cannot be assumed that permission will automatically be granted by the Highway Authority for connection to the existing highway drainage system within adjacent maintained roads.

A1.3 The developer is required to make adequate and satisfactory outfall arrangements for his development in accordance with this Appendix.

A1.4 This Authority endorses, indeed encourages, the use of Sustainable Urban Drainage Systems, and by way of examples as to the flexibility of approach the following are considered suitable as potential outfalls for a highway drainage system:

i. Watercourses
ii. Soakaways/soakage trenches
iii. Swales/basins
iv. Existing highway drains
v. Existing public surface water sewers

A1.5 All of the above systems require the written approval of the Highway Authority at an early stage, and for some a commuted sum to cover future maintenance of the system will be required. Details can be secured from the Group Engineer, Bridges (Highway Management).

Appendices

A - Rainfall intensity chart (pdf format, 13.5Kb)
B - Calculation of Run-off from Catchment Areas (pdf format, 230Kb)
C - Determination of Soakaway Capacity (pdf format, 13Kb)
D - Approved small Oil Interceptor HSD/5/425 (pdf format, 1.55Mb)
E - Positioning of Soakaways and Soakage Trenches (pdf format, 338Kb)
F - Environmental Agency, Special Requirements (pdf format, 26Kb)
G - Application for Consent for Works affecting (pdf format, 34Kb)
Watercourses and/or Flood Defences (Form No. FDI) (pdf format, 34Kb)
H - Environmental Agency - Policy Regarding Culverts (pdf format, 128Kb)

Drawings

HSD/5/320e - Catchpits: Design Group C2 (pdf format, 636Kb)
HSD/5/345ex - Catchpits: Design Group C5 (pdf format, 692Kb)
HSD/5/365e - Soakaways: Design Group S1 - S5 (pdf format, 664Kb)
HSD/5/425 - Oil Interceptor (pdf format,1.55Mb)
HSD/5/460e - Gullies: Design Group G2 (pdf format, 511Kb)
HSD/5/475e - Gullies: Design Group G4 (pdf format, 560Kb)
HSD/5/510e - Gullies: Design Group G9 (pdf format, 554Kb)
HSD/5/530c - Headwall: Type 1 (pdf format, 542Kb)
HSD/5/535b - Headwall: Type 2 (pdf format, 1Mb)
HSD/5/540b - Headwall: Type 3 (pdf format, 578Kb)
HSD/5/542b - Headwall: Outlet Grid Cover (pdf format, 382Kb)
HSD/5/543c - Headwall: Inlet Grid Cover (pdf format, 565Kb)

A2. Street Lighting Design Requirements (revised June 2017)

A2.1 Oxfordshire County Council provides a comprehensive street lighting design service using the latest specifications and computer aided design facilities. These designs show the minimum number of lights required to meet the appropriate category of lighting laid down in British Standard BS5489:2013. This also ensures the most efficient installation and keeps the capital cost, as well as future maintenance and energy costs, to a minimum. Doing this will also help in managing our Carbon Reduction Commitment.

A2.2 We also had to consider the on-going reliability, ease of maintenance and energy consumption of equipment. Therefore we have decided to standardise on the types of equipment we specify, which includes LED and dimming technology.

A2.3 We have resolved to make a charge for design work which we carry out for third parties. The fee is based on 5% of the estimated capital cost of the installation works, subject to a £400 plus VAT minimum charge for each section 38 or 278 agreement.

A2.4 However, if a developer/Consultant wishes to make arrangements to carry out their own street lighting design a specific design brief for your site must be obtained from the Electrical Services – Lighting section. The Lighting design must be carried out by a competent and specialist trained outdoor personnel, designs must be submitted with the full engineering layout drawing showing the scope of works and with calculations for approval prior to any installation work commencing on site.

A2.5 Failure to seek approval of the street lighting design will prevent completion certificate being issued. Please note that lighting designs submitted by third parties on more than two occasions will incur a further administration fee of £300 plus VAT for each subsequent submission. The charge will have to be paid in advance before any approval can be given.

A2.6 Please contact our street lighting team to discuss your requirement further, when the adoptable areas have been finalised and agreed with our Roads Agreement team.

A2.7 It will be the responsibility of the consultant or developer, depending on who carries out the lighting design, to ensure to mark the final column positions on site, as per the approved scheme drawing with the street lighting contractor this is normally at the rear of the service strip. Please also ensure that no trees are to be planted within ten metres of the proposed column position.

The developer/consultant will also be responsible for dealing with any queries that arise from members of the public etc. copies of all correspondence should be forwarded to the Street Lighting Section for our records, please email the address below

streetlighting@oxfordshire.gov.uk

A2.8 The electricity supply to new illuminated equipment must be either District Network Operator (DNO) owned or an approved registered Independent District Network Operator (IDNO). If an IDNO is chosen then a Service Level Agreement must be signed and sealed in advance of any equipment being taken on. The only exception being if the DNO refuses to provide a service to a traffic island or Major intersection in which case a private cable network would be necessary which will require an additional commuted sum. All Private Cable networks and IDNO networks layout drawings will need to submitted to OCC at approval stage and 'as constructed' drawings submitted for adoption stage plus cable calculations will be required for private cable networks

A2.9 Street lighting equipment will require a minimum 1.5 metre service strip to accommodate the DNO/INDO service cable, concrete collar and in vulnerable positions a column protection barrier. In footways it's normally a minimum 2 metre area that is required as per the recommendations the National Joint Utilities Group (NJUG) guidelines on the positioning and colour of underground utilities apparatus – Issue 4 – 29th October 2013.

http://njug.org.uk/wp-content/uploads/2016/09/V2-New-Development-Sites-Issue-4-29-10-2013.pdf

A2.10 Future maintenance and CDM requirements will need to be incorporated into the lighting and illuminated signs designs/layouts and where possible designed out, For example a base hinged lowering column is to be used on footpaths and areas not accessible with a mobile elevation platform wagon (i.e. behind parking bays).

A2.11 The developer will be responsible for the energy and maintenance of all electrical equipment (new and replacements as part of the section 278/38 agreement) as this is within the scope of their works. Oxfordshire County Council will take over the management and energy once the formal adoption certificate has been issued.

A3. Structural Procedures

Procedures for the structural approval of retaining walls, bridges and culverts adjacent to or on the highway (pdf format, 78Kb)

A4. Planting on adoptable highways

Trees and shrubs acceptable for planting in adoptable highways (pdf format, 49Kb)

A5. Acceptable materials

Enquire with OCC Highway Authority

A6. Parking Standards for the City & Districts

A6.A – Oxford City Parking Standards

A6.A1. Oxford has lower parking standards than the rest of the county (**Table A6A1)** as it has lower rates of car ownership and good accessibility by non-car modes to a wide range of facilities. Even within the city there are differing degrees of access to local facilities and public transport and car ownership is typically lower in the city centre than the outer areas. For these reasons there are two parking standards that will apply: within the Transport Central Area as defined by the City Council in its planning policy documents and outside that area.

A6.A2. These recommendations should be treated as optima, reflecting good overall accessibility by non-car modes, and the need to use land efficiently. Also, shared off-plot parking, combined with on-plot parking where appropriate, will be encouraged.

A6.A3. Proposals, which are considered to have over-generous parking provision, will not be supported. Equally, proposals with substantially reduced parking provision may be unacceptable in some circumstances, for example, where this would result in unacceptable parking pressure on existing streets, which could not be reasonably mitigated. The onus is on the developer to show that the implications of the parking provision are acceptable.

Parking Provision – Outside the Transport Central Area

A6.A4. The amount of parking that would be required to meet forecast demand in new developments is shown in **Table A6A1**.

A6.A5. In new small scale development outside the Transport Central Area and in the tighter built up areas where densities are high and traditionally no on-plot parking is provided then proposals may not need to provide on-plot parking. In other cases **Table A6A1** will form the basis of the assessment.

A6.A6. Where local circumstances allow, a substantial element of shared off-plot parking will be preferred over the provision of 2 or more spaces per unit.

Parking Provision within the Transport Central Area

A6.A7. Proposals will be assessed case by case in the context of the Oxford Local Development Framework and will be lower than the parking provision recommended outside the Transport Central Area. 'Car-free' development or low level of parking provision will be encouraged, and when in a controlled parking zone will be enforced through exclusion from that **controlled parking zone**.

A6.A8. No more than 1.0 spaces per dwelling will be permitted within the Transport Central Area. Within the West End, flats will be car-free with disabled parking only.

A6.A9. Car parking spaces provided within the Transport Central Area can be provided by an allocated and unallocated mix to suit the specific location and development layout.

Student Accommodation

A6.A10. For both inside and outside the Transport Central Area student accommodation will be car free in terms of parking. However, provision of parking for the mobility impaired will be provided of one space per bedroom for 5% of the total number of bedrooms provided.

Houses of Multiple Occupation

A6.A11. **Table 6A1** will be used primarily to assess **Houses of Multiple Occupation** (HMO). However where 7 or more occupants are proposed in an area where parking congestion occurs then the Council may require additional spaces to ensure that a suitable and appropriate number of spaces are provided.

Car-free development

A6.A12. 'Car-free' development is defined in this document as accommodation for people who are prepared to relinquish their right to keep a private car in Oxford. 'Car-free' development is encouraged, which can bring significant benefits where properly implemented in appropriate locations.

A6.A13. 'Car-free' development will be acceptable in Oxford, provided that there are excellent alternatives to the car, shops and services are located nearby, and the car-free status of the development can realistically be enforced by planning condition, planning obligation, on-street parking controls or other means. The onus is on the developer to demonstrate that there are no adverse implications.

A6.A14. Many smaller residential proposals, involving domestic extensions, subdivision of a dwelling house into flats, and small infill development, do not specifically provide additional parking. These may be described as '**car parking free**'.

A6.A15. The addition of a few dwellings, without the provision of additional parking spaces to a particular area may be acceptable, either where there is reasonable and safe on-street parking capacity (as made clear by appropriate supporting information) or where there is excellent accessibility for those without a car and on-street parking controls are in place or will be provided.

Low car housing

A6.A16. An alternative to 'car-free' residential development is '**low car**' (or '**low parking**') housing, where the proposed parking provision is significantly below the parking standard. Such proposals will generally be assessed using the same principles as for car-free development.

Car clubs

A6.A17. 'Car-free' or 'low car' developments will be encouraged to incorporate or otherwise support a car club, which can be an attractive alternative to private car ownership and boost the attractiveness of such housing.

A6.A18. A car club provider makes cars available to local residents, and they are then shared between the households on a 'pay-as-you-go' basis.

A6.A19. Car clubs are particularly suited to areas of high-density development and areas with good accessibility to local services and public transport.

Unallocated parking

A6.A20. In general proposals with unallocated parking will be supported with up to 100% unallocated parking within a controlled parking zone or a Home Zone.

Garages

A6.A21. The provision of residential car parking in the form of garages will be discouraged within the city, as evidence suggests they are less well used than other forms of residential parking.

Conversion of Front Gardens to Parking Areas

A6.A22. Many planning applications propose the conversion of private amenity space at the front of dwellings to hard-standing, to provide additional on-plot parking. This is particularly common where houses are subdivided into flats, and may be considered necessary to prevent undue pressure on the public highway.

A6.A23. However, the cumulative impact of multiple hard-surfaced parking areas can change the character of an area and also significantly increase surface water run-off, which can, in turn, increase local flood risk. Also, the benefit of providing off-street spaces as 'front garden parking' will need to be weighed against the loss of existing on-street capacity as a result of new or extended drop-kerb.

Table A6.A1.
Car Parking Provision in New Developments in Oxford outside the Transport Central Area

Number of bedrooms per dwelling	Number of Allocated Spaces	Number of Spaces When 2 Allocated Spaces per Dwelling are Provided		Number of Spaces When 1 Allocated Spaces per Dwelling are Provided		Number of Unallocated Spaces When no Allocated Spaces are Provided
		Allocated Spaces	Unallocated Spaces	Allocated Spaces	Unallocated Spaces	
1	1	N/A	N/A	1	0.4	1.0
2	2	2	0.3	1	0.7	1.5
3	2	2	0.4	1	0.9	1.8
4+	2	2	0.5	1	1.2	2.1

A6.B – Cherwell Urban Areas Parking Standards

B.1. The parishes, which define the urban areas in Cherwell are:

i. Banbury,
ii. Bicester,
iii. Kidlington,
iv. Bloxham,
v. Bodicote,
vi. Adderbury,
vii. Yarnton
viii. Gosford & Water Eaton.

B.2. The car parking provision in new developments for the urban areas in Cherwell area are set out in **Table A6.B1**.

Table A6.B1
Car parking provision in new developments for urban areas in Cherwell

Number of bedrooms per dwelling	Number of Allocated Spaces	Number of Spaces When 2 Allocated Spaces per Dwelling are Provided		Number of Spaces When 1 Allocated Spaces per Dwelling are Provided		Number of Unallocated Spaces When no Allocated Spaces are Provided
		Allocated Spaces	Unallocated Spaces	Allocated Spaces	Unallocated Spaces	
1	1	N/A	N/A	1	0.4	1.2
2	2	2	0.3	1	0.6	1.4
2/3	2	2	0.3	1	0.7	1.5
3	2	2	0.3	1	0.8	1.7
3/4	2	2	0.4	1	1.0	1.9
4+	2	2	0.5	1	1.3	2.2

Note 1: The rows in the table for 2/3 bedrooms and 3/4 bedrooms can be used when there are additional rooms in the dwelling which are not shown as bedrooms but where there is a high chance that they could be used as bedrooms.

Note 2: The Council will consider **North West Bicester Ecotown** as a special case provided that certain minimum criteria are met. If there is a full range of every day services provided within easy walking or cycling distance of the dwelling and convenient access to an efficient public transport system accessing a wider range of services including employment, one allocated car parking space per dwelling will be required, regardless of dwelling size or tenure. This may be on plot or off plot. Off plot provision may be grouped in a parking court provided the courts are small, close by, secure and conveniently accessed. Additional unallocated off plot car parking may also be provided according to the principles of this document up to a maximum of one space per dwelling. A lower standard of parking may be acceptable dependent upon the layout and accessibility to services and to other modes of transport in agreement with the Highway Authority.

A6.C – Parking Recommendations for all Other Areas in Oxfordshire (Other than Oxford and Cherwell Urban Areas)

A6.C1. Car parking provision recommendations for all other areas of Oxfordshire (other than Oxford and Cherwell Urban Areas) are set out in **Table A6.C1**.

Table A6.C1
Car parking Provision in New Developments for all Areas of Oxfordshire (Other than Oxford and Cherwell Urban areas)

Number of bedrooms per dwelling	Number of Allocated Spaces	Number of Spaces When 2 Allocated Spaces per Dwelling are Provided		Number of Spaces When 1 Allocated Spaces per Dwelling are Provided		Number of Unallocated Spaces When no Allocated Spaces are Provided
		Allocated Spaces	Unallocated Spaces	Allocated Spaces	Unallocated Spaces	
1	1	N/A	N/A	1	0.4	1.2
2	2	2	0.3	1	0.6	1.4
2/3	2	2	0.3	1	0.8	1.6
3	2	2	0.4	1	0.9	1.8
3/4	2	2	0.5	1	1.1	2.1
4+	2	2	0.6	1	1.5	2.4

Note: The rows in the table for 2/3 bedrooms and 3/4 bedrooms can be used when there are additional rooms in the dwelling which are not shown as bedrooms but where there is a high chance that they could be used as bedrooms.