DGN1: Parking & Servicing

Document:	WBC Design Guidance Note	**Version:**	1.0
	Parking & Servicing	**Date Published:**	September 2015

Contents

1. Introduction

1.1. This Design Guidance Note is intended to provide additional guidance to support the Warrington Borough Council Standards for Parking in New Developments which was adopted as a Supplementary Planning Document (SPD) on the 16th March 2015 (hereafter referred to as the SPD).

1.2. It sets out design standards for off-street parking in residential and commercial developments and provides further advice on on-street parking design. Additionally, it provides design advice on:

- Cycle parking
- Motorcycle parking
- Electric vehicles
- Servicing & waste collection
- Turning heads
- Design vehicles

1.3. In addition to this document, users of this guide are encouraged to consider the guidance provided in Manual for Streets, which has considerable information on the provision, design and layout of parking spaces in new residential development. The principles in this DGN aim to follow those set out in Manual for Streets.

1.4. The location and layout of spaces within a development are of paramount importance to the success of the chosen parking layout. It is therefore important that users of this guide follow the advice in the chapter to achieve a layout which operates successfully and not adversely affect the free flow of traffic or the safety of other road users. If adequate parking is not made available it is likely to result in indiscriminate parking on the highway thereby causing obstruction and danger to other road users and could result in the refusal of planning applications. Therefore it is recommended that the guidance contained herein is considered at pre-application stage, particularly for major developments.

Document Structure

1.5. This document is split into four parts and users should refer to the appropriate section of the document to ensure that their parking and servicing proposals are designed appropriately:

- Section 2: Residential Development
- Section 3: Commercial, Industrial and Schools
- Section 4: On-street parking
- Section 5: Design Vehicles and Swept Paths

2. Residential Development

General

2.1. The guidance in this section applies to all forms of residential development including new dwellings, conversions, subdivision of plots and house extensions.

2.2. It is acknowledged that the majority of residents will own or have access to a car. However, a balance needs to be struck between providing adequate parking provision and creating better environments for residents, alongside contributing towards a sustainable transport policy.

2.3. Required parking standards for residential development are set out in **Appendix A**.

2.4. The basis of the standards is that car parking in residential developments is deemed to be either allocated or unallocated.

- Allocated spaces are those that are dedicated to drivers from a particular unit or dwelling – and are often sold as part of the dwelling.
- Unallocated spaces can be provided on-street or in communal parking areas and are to be available for all. Unallocated spaces are a more efficient use of space because different drivers / visitors can utilise each space through the course of a day.

2.5. On-street parking is dealt with in Chapter 4 of this guidance, however, it should be noted that where the intention is for on-street parking to be considered as part of the unallocated provision for a residential development it will be necessary to demonstrate that adequate supply exists. Where on-street parking operates at 85-100% capacity, at times of peak parking demand, it will be deemed to be unavailable to accommodate any additional demand.

Vehicle Access from the Public Highway

2.6. There are inherent risks to highway safety associated with any vehicle leaving the carriageway and crossing the footway to gain access to residential property. This section provides guidance on the most appropriate form of vehicle access to residential properties from the public highway where off-street parking is being provided.

Dropped Kerbs

2.7. A detailed guidance note and application form, for applicants who are seeking to provide vehicular access to properties from the public highway, is available at:

https://www.warrington.gov.uk/forms/form/260/en/dropped_kerb

2.8. Key points to note from the guidance include:

- Any persons wishing to create an access must seek permission from the highway authority which if approved, is granted under Section 184 of the Highways Act 1980.

This permission is granted to the landowner (or tenant with landowner agreement) and is valid for 1 year; and

- The highway authority is not required to grant permission in all cases as it is not a given right to have a vehicle access from the highway, only where it is safe to do so and where it does not interfere with the operation of the highway.

2.9. In some instances proposals may also require planning permission from the Council's Planning Department. This permission, if required, is in addition to approval from the highway authority and must be obtained in advance.

2.10. Only a single access point per dwelling will be acceptable, unless the provision of a second access point has demonstrable road safety benefits.

2.11. Dropped kerbs are not permitted within 20m of a junction with a classified road (i.e. an 'A', 'B' or 'C' category road. To reduce the number of vehicular crossings of the footway, only a single vehicle access point per dwelling will be acceptable, unless the provision of a second access point has demonstrable road safety benefits.

2.12. A typical domestic dropped kerb width is 2.75m, as illustrated below in **Figure 1**, although wider dropped kerbs may be permissible.

Figure 1. Typical Dropped Kerb

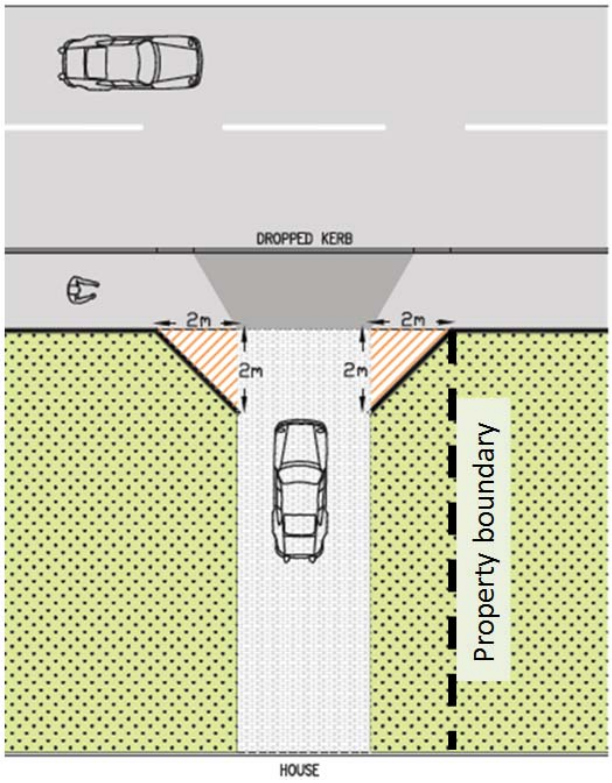
2.13. Adequate visibility must be provided for all new vehicle accesses.

2.14. For junctions, the council follows the visibility guidance contained in Manual for Streets for roads with speed limits of 30mph or less. All land required for visibility splays should be in the control of the applicant or developer, or within the adopted highway boundary. If this is not the case then a legal agreement will be required with the owner of the third party land to provide and retain adequate highway visibility splays.

2.15. Pedestrian visibility splays must be provided where a private drive joins the back of footway.

2.16. For private driveways, pedestrian visibility splays should measure 2m x 2m and be kept clear of any obstructions over 0.6m in height above the level of the back of the footway as illustrated in **Figure 2** below, with the splays shown in orange hatching. The full extent of the orange zone needs to be within the property boundary to enable on-going maintenance of the visibility splay.

Figure 2. Pedestrian Visibility Splays



Access to Communal Parking Areas

2.17. The form of vehicle access to communal parking areas is largely determined by the amount of parking served by the access. Where a dropped crossing is not appropriate (for developments of more than 5 dwellings), a kerbed, bell-mouth junction shall be provided. For more information on the design of 'bell-mouth' junctions please refer to Manual for Streets.

2.18. Irrespective of the form of junction adequate visibility for the design speed of the road shall be adhered to. The Council follows the guidance contained in Manual for Streets for roads with speed limits of 30mph or less; however it is intended that further guidance will be provided within a DGN on Road and Footpath Standards.

Driveways

2.19. Driveways in the context of this chapter refer to either a private driveway serving a single dwelling or a shared private driveway serving up to 5 dwellings.

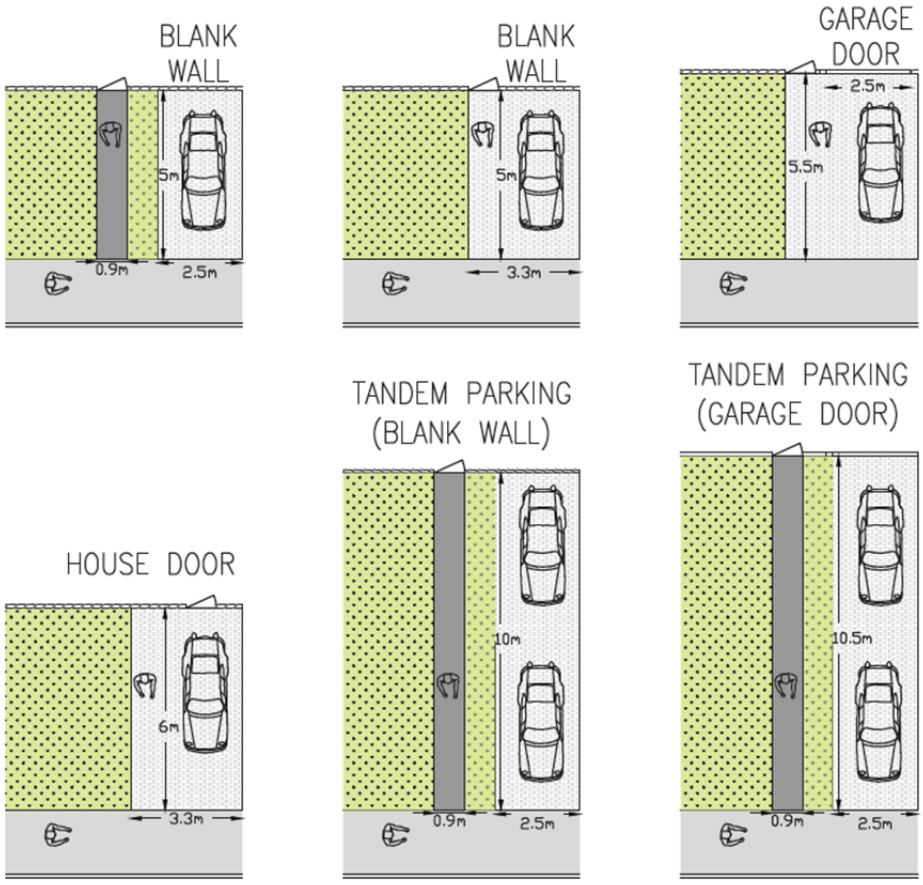
Private Drives Serving a Single Dwelling

2.20. The minimum width of a private drive serving a single dwelling is 3.3m, which may be reduced to 2.5m where a separate means of access on foot to the property is available, as illustrated in **Figure 3** below.

Figure 3. Private Drive

2.21. The minimum length of a private drive is dictated by the site layout. **Figure 4** sets out the minimum lengths required for different circumstances.

Figure 4. Private Driveway Dimensions (serving a single dwelling)



2.22. Gradients shall not exceed 1 in 12.5 (or 8%) fall towards or away from the highway for a distance of at least 5m from the back edge of footway.

2.23. Any surface water run-off from within the curtilage of a private dwelling must not discharge onto the highway or into the highway drainage system.

2.24. Adequate drainage facilities or permeable surfacing on the area of hard standing will need to be provided to prevent the risk of standing water on the highway.

2.25. The first 5m of a shared private drive shall not be surfaced in granular or loose material to prevent it being transferred onto the highway which can cause highway safety problems, blockage of the highway drainage system, and potentially risk injury to pedestrians or damage to vehicles.

2.26. Where gates are to be provided at the edge of carriageway or footway they should only open inwards or slide parallel to the highway within the curtilage of the property. Outward opening gates should be set back from the highway to ensure that opened gates do not obstruct the footway or carriageway. Where gates open inwards, the driveway should be of a sufficient length and width to enable the opened gates to clear a vehicle parked on the driveway.

2.27. Where the location of access gates prevents a vehicle entering the property from pulling clear of the public highway, consideration needs to be given to the potential road safety impacts of a waiting vehicle. In certain cases, (for example on a high speed road, in an

area of high pedestrian footfall, or on a blind bend), automatic access gates and/or a suitable space for vehicles to pull off the public highway may be required to minimise road safety issues.

Shared Private Drive (Serving up to 5 Dwellings)

2.28. Shared private drives, serving up to 5 dwellings, are private vehicular accesses without any public right of way and are not adopted by the highway authority as publically maintainable roads. Shared private drives are generally accessed by dropped kerbs from the adopted highway. However, in some situations the Council reserves the right to require the construction of a full kerbed access junction even when there are fewer than 5 dwellings to be served from it. This is generally when specific road safety concerns have been identified and this is deemed to be the safest form of access.

Figure 5. Shared Private Drive

2.29. The minimum width of a shared private drive is 4.5m. The access should not be located within 20m of a junction with a classified road.

2.30. To reduce the number of vehicular crossings of the footway, only a single vehicle crossing will be acceptable, unless the provision of a second access point and associated crossing has demonstrable road safety benefits.

2.31. The layout will provide adequate provision to allow access by emergency services and delivery vehicles.

2.32. Shared private drives must provide adequate visibility where they join the public highway.

2.33. The advice contained in Manual for Streets on visibility is usually followed by the Council. However, in some locations subject to higher vehicle speeds or where it is considered that there is a particular highway safety issue, the more onerous requirements from DMRB may be used. It is intended that further guidance will be provided within a DGN on Road and Footpath Standards.

Garages (for a single dwelling)

2.34. Experience suggests that garages are often not used for vehicle parking and as such this guidance sets out the minimum dimensions which allow a limited amount of storage (including cycle storage) in addition to the vehicle parking. Garages which meet the minimum size requirements will be counted towards overall parking provision; however a further 0.6 unallocated spaces will then be required to take account of the potential lack of use of garages for parking. For the same reason, where double-garages are proposed then they will count as only one car parking space.

2.35. The minimum internal dimensions for a garage are:

- Single garage – 7m x 3m or 6m x 3.5m with a minimum door width of 2.5m
- Double garage – 5m x 6m with a minimum door width of 5m

Communal Parking Areas

2.36. Certain types of residential development such as blocks of apartments will require communal parking areas. Within these parking areas, spaces will be designated as allocated or unallocated as set out in paragraph 2.4. Unallocated parking is preferred as this allows more efficient use of available space.

Car Parks

2.37. Car parks are usually provided for blocks of apartments and the design of the car parks associated with them should follow the advice contained in Chapter 3 of this guidance.

Courtyards

2.38. Rear parking courtyards are sometimes provided for a number of individual dwelling houses rather than apartments.

2.39. Rear parking courtyards shall only be considered when all other options have been exhausted and where there are highway constraints preventing alternative options.

2.40. If rear parking courtyards are to be provided the design needs to be carefully considered and as a minimum adhere to the following:

- Be provided for no more than 6-10 dwellings;
- Be provided within 20m of an entrance (front or rear) to all properties served;
- Be provided with a direct pedestrian route to every appropriate property entrance;
- As far as is practically possible offer residents full view of their vehicle from lower and upper floor windows;
- Be designed to encourage natural surveillance;
- Be well lit and appropriately landscaped;

- Have an agreed maintenance and management schedule; and
- Be supported by appropriate TROs where necessary to encourage use and avoid inappropriate on-street parking.

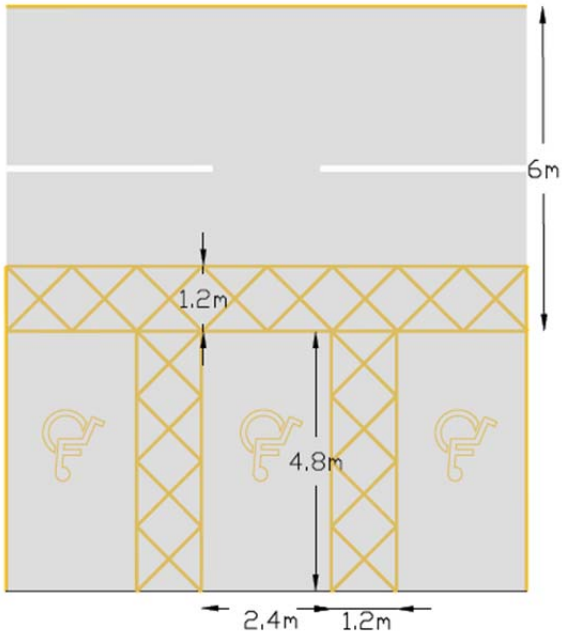
2.41. Parking courtyards will not be adopted by the Council and therefore developers should fully consider in advance the management and maintenance of courtyards once the development is operational.

Mobility Impaired / Disabled Parking

2.42. Where communal parking is provided, disabled parking provision shall be provided in line with the parking standards contained in **Appendix A**.

2.43. Disabled parking spaces shall measure 3.6m x 6.0m consisting of a 2.4m by 4.8m space with a 1.2m rear and side transfer zone, which can be shared by two adjacent spaces. The dimensions are shown in the figure below.

Figure 6. Disabled Parking Dimensions



2.44. The design of disabled parking should be undertaken with reference to *"Designing for Accessibility" RIBA (2012)* and relevant British Standards Codes of Practice (BS8300:2009=A1:2010).

Electric Vehicles (Residential)

2.45. The Council recognises that electric or plug-in hybrid vehicles currently only make up a small proportion of the total number of vehicles on the road. However, as the technology develops it is expected that the numbers will increase. It is therefore important that facilities are provided as much as possible now or that when the opportunity arises future development is capable of accommodating recharging facilities.

2.46. To facilitate this, new residential developments with communal parking will be expected to provide 5% coverage of charging points where possible, or provide the infrastructure to allow the easy installation of charging points. For housing developments, each new dwelling should be fitted with an external (or included within a garage) electric vehicle charging point unless it is demonstrated that this will affect the viability of the development. In such cases developers should demonstrate how a charging point could easily be fitted retrospectively – e.g. by identifying suitable location, electricity supply, ducting etc.

2.47. Given the evolving technologies involved, the onus will be on the developer to provide suitable specifications for the development for approval by the council. Developers may wish to refer to BEAMA's "A guide to electric vehicle infrastructure".

2.48. For small residential development (e.g. extensions and alterations affecting parking) applicants will be encouraged to install a charging point during the works to their property, but installation will not be mandatory.

Bicycle Parking (Residential)

Individual Dwellings

2.49. It is recognised that in the majority of cases cycles will be stored in a garage or secure outbuilding, however, for flats, provision should be in a dedicated cycle storage area accessible to all residents and their visitors.

2.50. For individual dwellings where cycle parking is provided in an outbuilding to the rear of the property we will expect that an external route is available to access this building. This route must be a minimum of 1m wide.

Communal Bicycle Parking

2.51. New developments or significant changes to existing sites must as a minimum meet the bicycle parking ratio set out in the Parking Standards. In addition the design of communal bicycle parking needs to take account of the following:

- Secure, with access for residents only, and with stands/racks allowing both the frame and both wheels to be secured;
- Well located: As close as is feasible to the entrance of the property (no more than 30m away) and ideally closer than equivalent car parking facilities;
- Located so that routes avoid obstacles such as stairs, multiple doors, narrow doorways (less than 1.2 metres wide) and tight corners, or appropriate infrastructure is made available to mitigate against obstacles (e.g. lifts and/or wheeling ramps);
- Covered;
- Fully accessible, for parking all types of bicycle;
- Managed, where possible, in order for access to be administered and to provide ongoing maintenance; and

- Any external balcony area associated with a dwelling (regardless of height above ground level) will not be considered as cycle parking.

2.52. The guidelines in Section 3 'Bicycle Parking (non-residential and communal residential provision)' will also apply.

Emergency Access

2.53. It is essential that emergency vehicles can gain access to any incident occurring in a residential development. The provision of more than one point of access to the existing highway network should generally be made for sites serving in excess of 100 dwellings, and is also desirable for sites in excess of 50 dwellings.

2.54. A secondary emergency route may be provided via a second highway access into the site or via a route where general traffic would not normally travel; for example a cycle track of appropriate dimensions.

2.55. The fire service determine the vehicle size requirements and Approved Document B of the Building Regulations specifies the details of the required access and this should be adhered to in all cases. **Table 1** below presents the typical dimensions which should be catered for in developments.

Table 1. Typical Fire and Rescue Service Vehicle Access

Appliance Type	Min width of road between kerbs (m)	Min width of gateways (m)	Min turning circle between kerbs (m)	Min turning circle between walls (m)	Min carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	12.5
High Reach	3.7	3.1	26.0	29.0	17.0

2.56. In addition, there should be vehicular access for a fire engine to within 45 metres of a dwelling, and where a continuous circuit is not available the appliance shall not have to reverse more than 20m to a turning facility to allow the appliance to leave the scene in a forward gear.

Waste and Recycling Collection

2.57. When designing new residential developments careful consideration should be given to access for refuse vehicles and refuse storage, to ensure that parking arrangements are compatible with waste and recycling arrangements. It is acknowledged that refuse vehicle access requirements are different for communal waste and recycling storage and for individual properties.

Table 2. Waste and Recycling Requirements

Communal Storage	Individual Properties
Refuse vehicles should not have to reverse more than 12m	Refuse vehicles should not have to reverse more than 12m
Residents should not carry waste more than 30m to any storage point	Residents should not carry waste more than 30m to any collection point
Waste collection vehicles should be able to get to within 25m of the storage point	Waste collection vehicles should be able to get to within 25m of the storage point
Where a bulky container is used collection operatives should not be expected to move the container more than 5m to the collection vehicle.	All developments must provide facilities for storage of 3 wheelie bins within the curtilage and ensure bins only need to be left in the footway for collections
Access paths should not be less than 1.5m wide and free of kerbs and steps	Footways should be of sufficient width to allow bins to be placed on street without obstructing pedestrians
A longitudinal gradient should not exceed 1:12.	Bin storage should not impede pedestrian routes or access to bicycle storage

2.58. When a building is being converted to residential use, careful consideration needs to be given to waste and recycling collection from the outset. Collection regimes which do not adhere to the above advice will not be supported without a clear management strategy and shall only be provided if it can be demonstrated that the above advice cannot be met because of site constraints.

2.59. The construction of access roads should be in accordance with the Council's Design Guidance Notes and should have suitable foundations to withstand the maximum payload of the vehicle.

Turning Areas

2.60. If a private access: serves more than one dwelling, and; adjoins a C class road with a speed limit greater than 30mph, or adjoins a class A or B road, then a vehicular turning area must be provided that enables a vehicle that is likely to use the access to leave and enter the highway in a forward gear.

2.61. If an adoptable cul-de-sac is accessed off a classified road or is greater in length than 20m then a vehicular turning area must be provided suitable to accommodate a large refuse vehicle.

2.62. Where the above criteria are not met and a turning area is not proposed, early discussions with the Council's Highways Development Control Team shall be held as part of formal pre-application discussions and the reasoned justification for the proposal supplied. The Council may require a safety audit to be undertaken on such proposals.

2.63. Where a turning area is provided then a vehicle tracking assessment should be provided indicating the largest type of vehicle that will be making a three point turn manoeuvre.

2.64. Paragraph 7.10.2 of Manual for Streets provides further information on designing vehicular turning areas.

2.65. The layout of the development must include measures to make sure that parked vehicles do not prevent the proper use of any turning areas.

3. Commercial / Industrial / Schools

General

3.1. Parking standards for non-residential developments are set out in **Appendix A**.

3.2. Parking provision should be calculated using the External Gross Floor Area of the development unless otherwise stated.

3.3. Where a proposal is for mixed use flexible permission (for example, permission is sought for B1, B2 and/or B8 use) parking requirements are to be determined using the worst-case parking demand scenario.

3.4. It is recognised that in some limited circumstances, publicly available parking provision in the town centre and within district centres may have the capacity to supplement parking availability for private development.

3.5. In both the town centre and district centres, developers will be expected to demonstrate that all options to achieve the standards on-plot have been exhausted. If off-site parking is required then developers will need to demonstrate that sufficient publicly available parking capacity is available to meet the standards at times of peak parking demand (both the development peak and peak times for other uses/facilities in the surrounding area), that there are no existing on-street parking problems in the immediate vicinity of the development, and that further on-street parking would not give rise to problems either individually or cumulatively.

Car parks

3.6. Car park layouts need to fully consider the needs of pedestrians and cyclists. Pedestrian routes need to be direct, of an appropriate gradient, and should emphasise pedestrian priority. Routes should follow expected desire lines. Cars should not be able to overhang footpaths or cycle paths and entrances to car parks need to ensure pedestrians are able to cross safely.

3.7. The standard off-street parking bay dimension is 2.5m x 5m.

3.8. The standard width for vehicular access and circulation aisles within a car park is 6m.

3.9. Tandem parking spaces (those that can only be accessed via another space) will not count towards the parking standards unless they are spaces on an open private individual driveway.

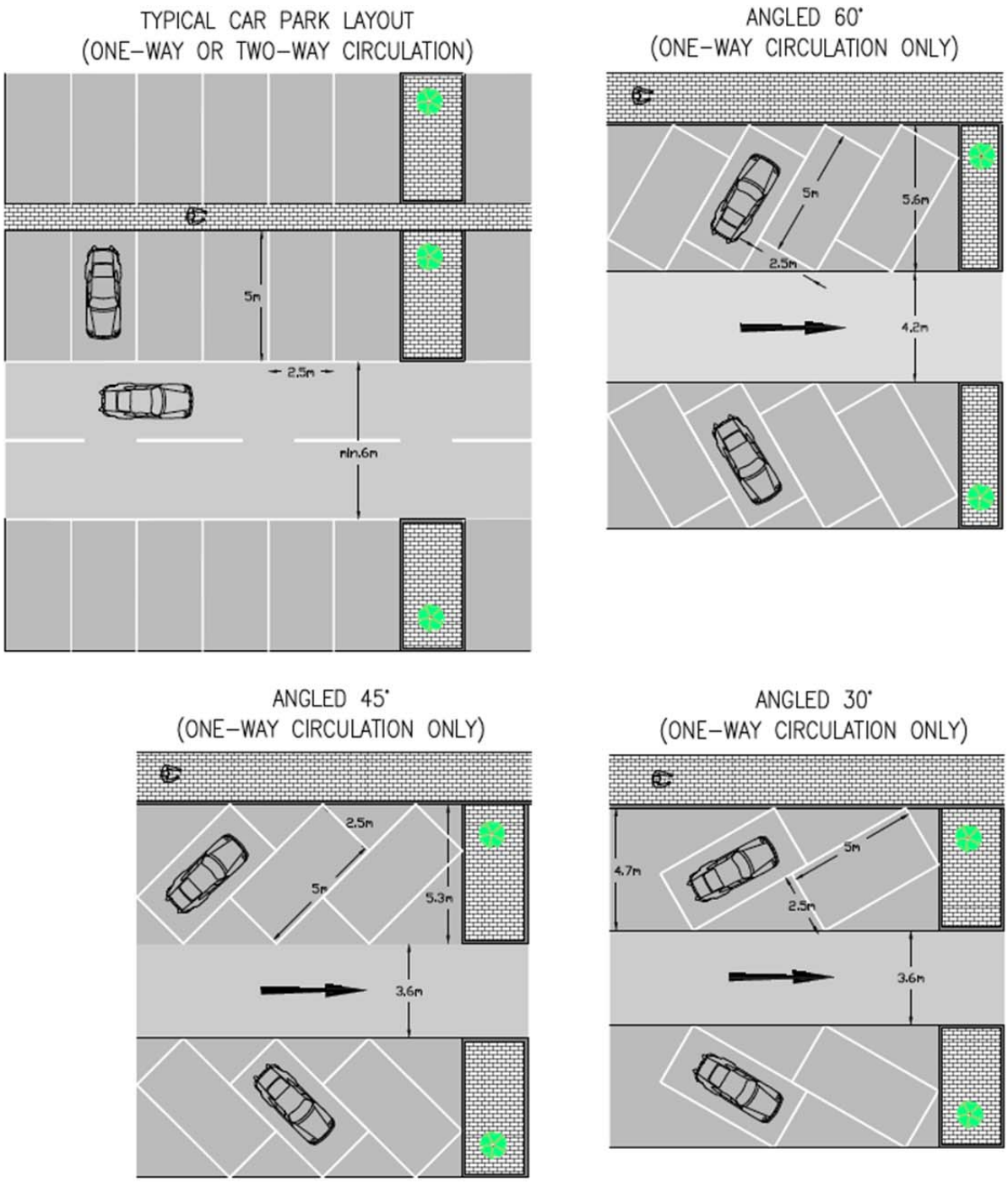
3.10. Parent and child parking spaces should be included if appropriate for the development, but should not be provided at the expense of adequate disabled provision.

3.11. If pick-up and drop-off zones are relevant for the type of development, they should be in close proximity to the principle entrance. Consideration is required to the likely routes vehicles will take to enter and leave the site.

3.12. Parking areas should be supported by appropriate Traffic Regulation Orders where necessary to encourage use and avoid inappropriate on-street parking.

3.13. Typical car park layouts are shown in **Figure 7**.

Figure 7. Typical Car Park Layouts



Landscaping

3.14. It is important to incorporate landscaping to improve the visual appearance of the site. Landscaped areas should include proposals to protect it from damage through the use of buffer zones, bollards, high kerbs and wheel stops.

3.15. Care should be taken to ensure that planting does not provide places for potential offenders to hide. Ideally no shrubs should be allowed to grow over 1m high and trees should have clean trunks (no side branches) up to 2m to provide clear site lines. Where planting is provided in the vicinity of a vehicular access, vegetation within a designated visibility splay should not exceed 0.6m in height.

Security and Lighting

3.16. It is recommended that the 'Secured by Design' initiative is considered when developing car park layouts to reduce crime and maximise personal safety.

3.17. CCTV should be provided where possible and should be managed and operated as part of the wider management of the car park.

3.18. Lighting should be considered for all parking areas as it can help to reduce crime and the fear of crime. The design of car park lighting should reflect the wider area and should not result in light spillage or road safety issues on any adjacent public highway.

3.19. Developers are encouraged to design car parks in line with national guidance when considering security. Industry schemes such as 'Secured by Design' or 'Park Mark' should be considered.

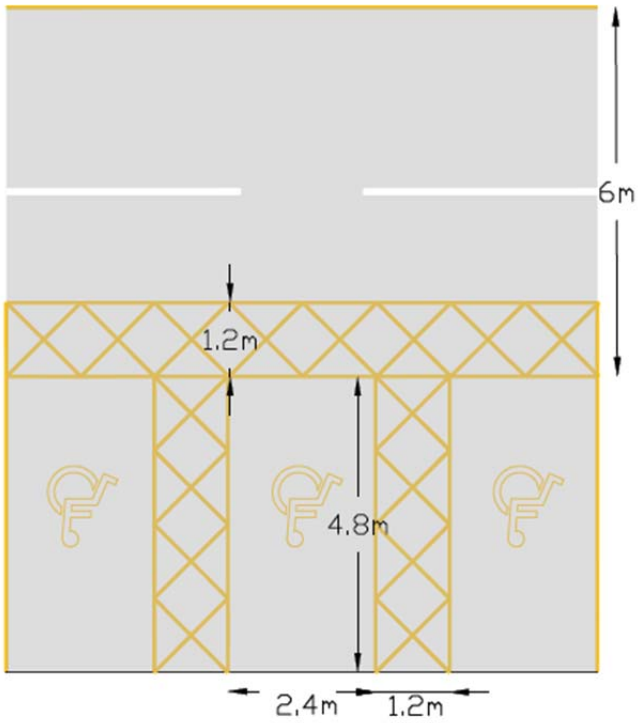
Disabled Parking

3.20. Disabled parking spaces should be designated in all non-residential development with 10 or more parking spaces.

3.21. **Appendix A** sets out the required proportion of designated disabled parking in non-residential development.

3.22. Disabled parking spaces shall measure 3.6m x 6.0m consisting of a 2.4m by 4.8m space with a 1.2m rear and side transfer zone, which can be shared by two adjacent spaces.

Figure 8. Disabled Parking Dimensions



3.23. The disabled parking requirements for developments with fewer than 10 bays will be established by negotiation with Council officers – however a minimum of one space will be expected in most circumstances.

3.24. Enlarged standard spaces should also be provided to allow for future expansion in the number of designated parking

3.25. Disabled parking should be clearly marked and positioned close to the entrance to the building with a safe level accessible route from the parking space to the building.

3.26. Disabled parking design should be undertaken with reference to *"Designing for Accessibility" RIBA (2012)* and relevant British Standards Codes of Practice (BS8300:2009=A1:2010).

Figure 9. Example of appropriate disabled parking and pedestrian route

HGV / Coach Parking

3.27. At commercial developments, as well as designing for the access and manoeuvring of service vehicles, it may be that additional provision is required for heavy goods vehicle (HGV) parking for a period of time whilst a driver is, for example, on a rest break. Increasingly, lorry parking takes place on industrial access roads or in lay-bys, and to ensure that such parking does not take place in environmentally unsuitable locations it is important that developments that will generate HGV traffic make some provision for lorry parking within their design. This principle should also apply to developments that will generate coach movements and/or large volumes of smaller delivery vehicles.

3.28. Accordingly, on industrial (B1(c)/B2 and warehousing/distribution (B8) developments, appropriate provision should be made for HGV parking as required for the specific operation of the site. Provision should be assessed on a site-by-site basis, taking into account the proposed operations at the site and the space required.

3.29. The following factors should be taken into account when designing lorry parking facilities as part of a development:

- Lorry parking should not obstruct the highway;
- Facilities should have a safe access from the highway, with preferably separate access points for cars and larger vehicles;
- The construction of the lorry parking area should be capable of taking the axle, steering and braking loads;
- The parking area must be of a sufficient size and shape to minimise manoeuvring to park;
- The parking area should be located so as to minimise noise and other nuisance and hazards to neighbouring development;
- There must be sufficient capacity to cater for maximum demand generated by the development, with no overspill parking onto the adjacent highway;
- Drainage systems should be designed so as to minimise the risk of pollutants entering the public drainage system; and
- Clear signage to direct drivers to the parking area.

3.30. The Council will not set prescribed standards for lorry parking provision, but will expect reasoned justification for their proposed provision based on the factors listed above and advice contained in Appendix A of the Standards for Parking in New Development SPD.

Bicycle Parking (Non-residential & communal residential provision)

3.31. The location and type of bicycle parking provides a key role in persuading cyclists to use it. Bicycle parking that is not convenient to the cyclist's ultimate destination or where security is perceived to be poor will often stand empty and be subject to vandalism.

3.32. The Council will generally expect a mix of short-stay and long-stay bicycle parking facilities for non-residential development and communal residential provision.

3.33. Appendix A of the Standards for Parking in New Development SPD provides minimum standards for bicycle parking in different forms of development. At all times the minimum requirements outlined in the parking standards must be met, or any relaxations from the standards must be appropriately justified and agreed with the Council.

3.34. Bicycle parking should be:

- **Fit-for-purpose** – meeting identified current and future demand, with an appropriate balance of short stay (less than 2 hours) and long stay provision (more than 2 hours);.
- **Secure** – stands in secure private or indoor spaces, or in visible, well-lit places that have high levels of natural surveillance; and
- **Well-located –** convenient, accessible, as close as possible to the destination, and linked to any existing or proposed local cycle network.

3.35. Where a development provides more than one access to a building, or group of buildings, it is highly likely to be preferable to have small groups of cycle parking facilities spread around the development rather than a single central location. The emphasis should be on providing the most convenient locations for users.

3.36. Clear links should be made between the cycle network and cycle parking facilities so that it is obvious how cyclists will access the parking.

3.37. There should be a safe and unimpeded route on bike to the parking, particularly where parking is accessed through a car park. Facilities that require cyclists to dismount and walk should be avoided wherever possible.

3.38. The provision of cycle parking facilities should fully complement cycle access opportunities to the development. This should include appropriate links to any local cycle network that either already exists or is proposed in an adopted local transport strategy.

3.39. Where appropriate, electric bicycle charging points should be considered within developments.

3.40. When making detailed decisions on the location of cycle parking facilities consideration will be given to the following criteria:

- Is there adequate space for cycle parking without compromising pedestrian flows?
- Is the location prominent and therefore well observed?
- Is the parking ideally located for cyclists needs/in close proximity to the intended destination?
- Can the location be easily accessed from the cycle network?
- Is the location well-lit with street lighting?
- Does the parking provision need to be covered?

3.41. To increase security and reassurance cycle parking should, wherever possible, be placed in locations observed by CCTV cameras.

3.42. An important consideration when designing cycle parking is whether the facilities are to be used for short stay (typically less than 2 hours) or long stay.

Short Stay Bicycle Parking Facilities

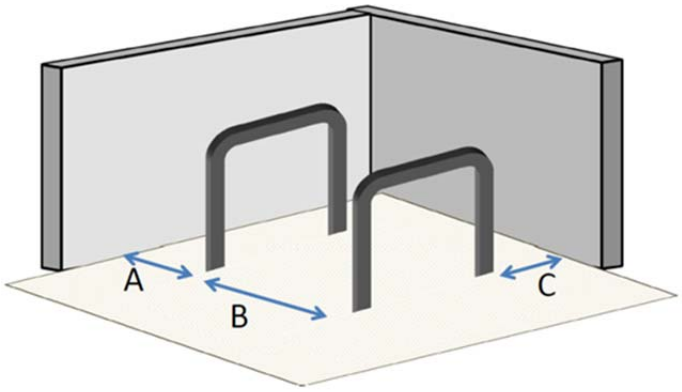
3.43. Short stay parking is appropriate when users will typically use the facility for 2 hours or less, such as visitors to a public building. These facilities should be open access for ease of use and avoid the need for access via a reception desk or with a separate key.

3.44. In locations such as town centres provision may be communal to the area rather than specific to each development. The need, location, quantity and form of short-stay cycling parking will be discussed as part of the planning application process.

3.45. 'Sheffield' type stands are generally considered the most appropriate form of parking for short stay provision, and are the minimum acceptable standard. Sheffield stands allow a cyclist to use their own lock(s) to secure the wheels and frame of the bike without removing them.

3.46. Stands must be spaced 1m apart to accommodate two cycles parked adjacently, and if perpendicular to a wall (or other vertical feature) should be located 550mm from that feature. If placed at 45º to the feature the minimum clearance will be 750mm measured perpendicular to the feature.

Figure 10. Bicycle Parking Location Measurements



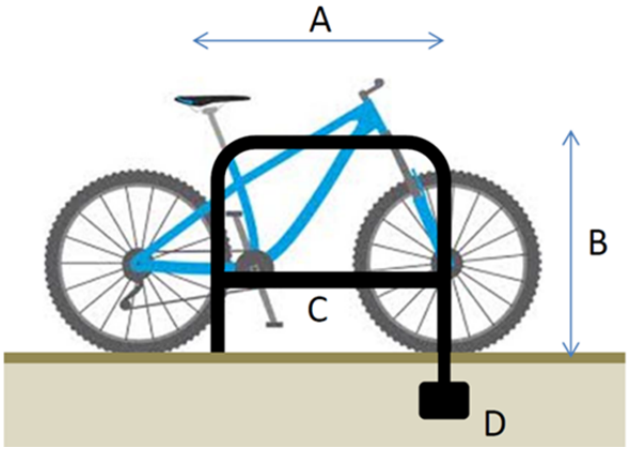
A: Distance to wall minimum 550mm

B: Distance between stands minimum 1000mm

C: Distance to wall minimum 550mm

3.47. ‘Sheffield’ stands should generally be between 0.7m and 1m in length and 700mm to 800mm in height. The tube diameter should be between 50mm and 90mm.

Figure 11. Cycle Parking Guideline Measurements



A: Length between 700-1000mm

B: Height between 700-800mm

C: Optional cross-rail to support smaller bicycles

D: Preferred option is to embed the stand into the ground

3.48. There are many alternatives to ‘Sheffield’ stands which offer equally good security and improved aesthetics - other designs will be considered as long as they:

- Support a parked bike to prevent it from falling by supporting the frame;
- Will not damage the bike in normal use (i.e. no sharp edges);
- Allow D locks to be used to secure wheels and frame;
- Encourage and enable users to lock both the wheels and the frame without having to remove wheels (using their own locks);
- If an integral lock is provided, it must not stop a user from using their own lock(s) either in addition to or instead of the integrated lock; and
- Are intuitive to use.

Long Stay Bicycle Parking Facilities

3.49. Long stay parking is appropriate where the user is likely to park their bike for a significant period of time; usually more than 2 hours. This could be at a train station for commuters, at places of work, or for residents of a block of flats.

3.50. Storage should be in a secure location within the curtilage of the sites that is only accessible to legitimate users and not the general public.

3.51. Long stay cycle parking shall always be covered.

3.52. The choice of type of long stay cycle parking is largely dependent on the end users and the level of security required. For example, if access to facilities is restricted, security is increased but it also acts a deterrent to cyclists who are not regular users.

3.53. If access is to be restricted then one of the following solutions is recommended:

- A freestanding cycle compound with 'Sheffield' stands (or equivalent) in a locked or gated compound;
- 'Sheffield' stands (or equivalent) located in a secure room or compound within the building; or
- Individual cycle lockers.

3.54. The storage areas should be easy and convenient to access and use. They should not be in isolated areas of the site and should be close to the main entrance or staff entrances. They should be well lit and should ideally have a power socket to allow charging of electric bicycles and have facilities for the storage of helmet and other accessories where appropriate.

3.55. For larger non-residential developments, or where a significant number of cyclists is anticipated, then appropriate changing, shower, and storage facilities should be provided in addition to long stay cycle parking. Provision of maintenance facilities (e.g. bicycle pump and tools) should also be considered at larger developments.

Figure 12. Secure bicycle parking

Unacceptable Provision

3.56. Cycle parking that only allows the wheels (and not the frame) of a bike to be locked is not acceptable. Examples include front wheel 'butterfly' stands and racks.

3.57. Parking that requires the bike to be lifted without assistance is not acceptable. This includes semi vertical bike racks, hanging hooks and vertical lockers.

Practical Considerations

3.58. The location of cycle parking facilities must not present a hazard to pedestrians, especially the mobility impaired.

3.59. There are several measures that can be taken to minimise the conflict between pedestrians and cyclists:

- Tactile surfaces around cycle parking;
- Raised plinths with a feathered edge in contrasting colours to the existing footway;
- Cycle parking placed on the median zone between the carriageway and the footway;
- Hoops to deflect pedestrian flow around cycle stands;
- Providing a tapping rail (with a maximum height above ground of 150mm) so that an empty rack cannot be walked into; and
- Banks of three stands with the middle one carrying a sign at eye level.

Motorcycle Parking

3.60. It is important to provide motorcycle parking that is appropriately designed and encourages use. Motorcycle parking needs to cater for a wide variety of vehicle sizes from a moped through to large touring bikes and it is imperative that designs reflect this range.

3.61. National guidance on motorcycle parking is contained within the Department for Transport's 'Traffic Advisory Leaflet 2/02 Motorcycle Parking the British Motorcyclists Federation guidance Parking for Motorcycles and Scooters' and the Motorcycle Action Group guidance 'Secure Parking for Motorcycles'.

3.62. It is recommended that designs adhere to the advice in these documents, whilst ensuring that parking:

- Bays should allow for an effective length of 2.3 metres and an effective width of 0.9 metres;
- Is provided with good lighting and is overlooked by passers-by or adjacent buildings;
- Is close to entrances into the building, but not to hinder pedestrians or the mobility impaired;

- Caters for the likely requirements of users. For example where long stay parking is expected this should be covered and offer protection from 3 sides;
- For larger developments or where a significant number of motorcyclists are anticipated, appropriate changing, shower and storage facilities should be provided;
- Provides locking mechanisms which are appropriate to the location and anticipated length of stay; and
- Ensures that no trip hazards for pedestrians are present when motorcycles are not parked.

Figure 13. Appropriate Motorcycle Locking Mechanisms

Electric Vehicles (Non-residential)

3.63. The Council recognises that electric or plug-in hybrid vehicles currently only make up a small proportion of the total number of vehicles on the road. However, as the technology develops it is expected that the numbers will increase. It is therefore important that when the opportunity arises future development is capable of accommodating recharging facilities.

3.64. Most new non-residential developments will be expected to have 5% of parking provision covered by electric vehicle charging points or where it is demonstrated to be unviable or undeliverable developers would be expected to demonstrate that charging points could easily be installed in the future – e.g. identification of the location, electric power supply and provision of necessary ducting.

3.65. Given the evolving technologies involved, the onus will be on the developer to provide suitable specifications for the development for approval by the council. Developers may wish to refer to BEAMA's "A guide to electric vehicle infrastructure".

Servicing & Delivery

3.66. It is essential that developments make adequate provision for all service and delivery vehicles to be accommodated without detriment to the safety of other road users or the free flow of all modes of transport.

3.67. Adequate provision must be made within a development site for parking, manoeuvring, loading and unloading to meet the operational requirements of the development. Vehicle swept path analysis may be requested to demonstrate the suitability of the site layout,

and further detail on suitable design vehicles for assessment is provided in the relevant subsequent section.

3.68. Service and delivery vehicles must be able to enter and exit the site safely in forward gear and turn around within the site.

3.69. Parking for deliveries should be segregated from visitor parking areas and screened (subject to visibility requirements) wherever possible – through the use of planting, railings, low rise walls etc. – to minimise the impact of service yard activity on the public realm.

3.70. Developers may be required to submit a Servicing Management Strategy in cases where high levels of service vehicle movements are anticipated, or where the site is constrained, or in an area subject to access and movement restrictions or experiencing highway safety issues. A Servicing Management Strategy may be retained for future operation of the site.

3.71. Security and convenience are important factors for any commercial operation where vehicles or trailers are likely to be left for long period. Each individual unit should have sufficient curtilage parking and loading areas in order to prevent vehicles and trailers being left on the public highway.

3.72. Parking requirements for industrial/commercial developments need to reflect the close link between the provision of space for the moving vehicle and the provision of terminal facilities required including short and long-term parking spaces, loading/unloading facilities, turning facilities and spaces for service vehicles and fire appliances. It is necessary to ensure that adequate and convenient provision has been made on site for relevant vehicles sizes to prevent indiscriminate on-street parking.

Table 3 – Parking Space Requirements for Typical Commercial / Industrial Vehicles

Vehicle Type	Length (metres)	Width (metres)
Light Goods Vehicle	7.5	3.5
Minibus	8.0	3.5
Coach (60 seater)	14.0	3.5
Rigid Heavy Goods Vehicle	14.0	3.5
Articulated Heavy Goods Vehicle	16.5	3.5

Turning Areas

3.73. Industrial/commercial developments which generate heavy goods vehicle movements will require areas away from the public highway where vehicles can be turned safely and parked securely when not in use. It is therefore important that adequate loading and parking areas are provided within the curtilage of the premises. As a guide, service yards should typically be of a minimum size of 20m x 20m or able to accommodate a 26m turning circle to enable an HGV to turn within the service yard.

3.74. The adequacy of on-site turning facilities shall be demonstrated by providing swept path drawings at an appropriate scale for the maximum sized design vehicle.

4. On-Street Parking

4.1. Where any development proposals incorporate on-street parking it should be remembered that this is unallocated car parking provision, and will only be considered able to serve the development's parking needs if there is sufficient evidence presented to demonstrate that the capacity is available and it is safe to be used.

4.2. Proposals for any new or amended on-street parking provision shall be consistent with the requirements of the Traffic Signs Regulations and General Directions (2002) or its successor document and the Traffic Signs Manual.

4.3. Where on-street parking is proposed along one side of a road, the carriageway width should be a minimum of 5.5 metres on straight sections. Where on-street parking is proposed along both sides of a road, the carriageway width should be a minimum of 7.5 metres on straight sections. In both cases the carriageway width will need to be greater where parking is proposed around bends in the road.

4.4. On-street parking should not take place in the vicinity of junctions, turning heads or private accesses. Traffic Regulation Orders implemented at the developer's expense may be required to restrict on-street parking in unsuitable locations.

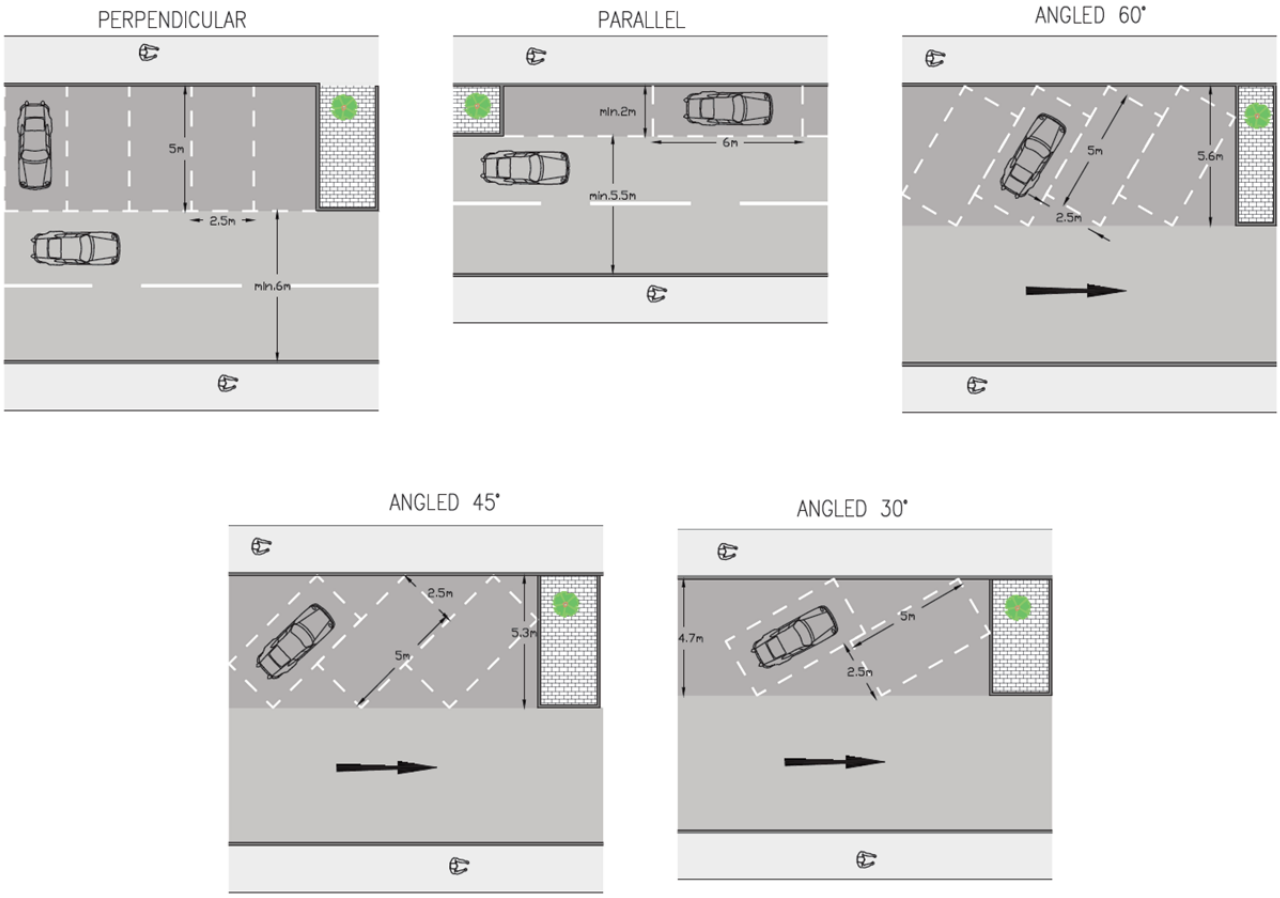
4.5. All on-street parking will be counted as unallocated provision and will generally be acceptable for short stay or visitor parking only. On-street parking will be one of four variations (which are illustrated in **Figure 13**):

- Parallel;
- Perpendicular;
- Angled (only accepted on one-way streets); and
- Parallel to central reservation.

4.6. Breaks in lines or rows of on-street parking bays over six spaces should be incorporated. This can be either for tree planting (where visibility is not impeded) or to make it easier for pedestrians to cross from one side to the other. Requirements for vehicular access to individuals properties should also be taken into account, with the potential provision of markings (implemented at the developer's expense) to discourage parking across driveways.

4.7. Parking which impacts on visibility or is within the minimum space required for a turning head will not count towards parking standards provision.

Figure 14. Selected On-Street Parking Variations



4.8. Parking angled at 30º will only be considered in limited circumstances and should be discussed with Officers in advance of its inclusion in any designs.

4.9. When considering on-street capacity where bays are not marked along the kerb edge but vehicles park parallel to it, the developer will allow 6m for the length of each vehicle. The total length of available kerb shall therefor be divided by 6m to give the amount of spare car parking capacity.

4.10. Pavement parking is not permitted and will not count towards meeting the required standards. Where a new highway is planned, pavement parking will not be an acceptable design solution. In all cases, on-street parking linked to a new development will not be permitted where there are highway safety concerns.

4.11. Traffic Regulation Orders may be required where the development has implications for on-street parking on adopted or adoptable roads. The developer will be expected to consider the need for and scope of required TROs and fund the provision of new markings and signage.

5. Design Vehicles and Swept Paths

5.1. The Council requires all development layouts and access routes to be assessed using appropriate design vehicles included in the Autotrack (or equivalent) software. Design vehicles should be representative of vehicle types likely to serve the development.

5.2. The manoeuvrability of large goods vehicles depends on their size and turning circle, whether they are rigid bodied or articulated, the number of axles and the skill and judgement of the driver. Some industrial and commercial estates may have to cater for a whole range of vehicle types and sizes.

5.3. It is not possible to specify the vehicle type which should be used as the design vehicle for each non-residential development as this largely depends on the end user and the characteristics of the development. It is advised that developers discuss the design vehicle with Development Control Officers in advance of any submissions to ensure that the most appropriate vehicle is used.

5.4. For residential developments a 12m rigid vehicle shall be the design vehicle, unless the layout dictates that larger vehicles are likely to use the roads i.e. if the road acts as a spine road through a development with junctions at both ends.

5.5. When presenting drawings of vehicle tracks, the following criteria should be applied:

- Vehicle tracking to be illustrated at an appropriate drawing scale;
- Vehicle profile to be shown in drawing frame;
- Vehicle tracking speed to be shown in drawing frame. Generally 15kph is acceptable, although lower speeds will be accepted for certain turning movements;
- Vehicle tracking to show both the body of the vehicle and wheel tracks;
- No hatching is to be shown within vehicle envelope to ensure no features are obscured; and
- A minimum 500mm offset to kerbs and other features from the outside edge of vehicle body shall be maintained.