



Bus Stop Design Guide



BUS STOP DESIGN GUIDE

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I. INTRODUCTION

- I.1 This Bus Stop Design Guide has been jointly produced by Road Service and Translink. It replaces the document **Bus Stops - A Design Guide for Improved Quality**¹ which was published jointly by Translink, Roads Service and the Department of the Environment for Northern Ireland in **October 1997**.
- I.2 The main purpose of this Design Guide is to present current best practice in relation to accessibility at bus stops. The document outlines requirements that meet the needs of bus users and, the changing profile of the Northern Ireland bus fleet with the introduction of low floor buses. In **1996/97** only **18%** of the Citybus fleet had facilities to assist disabled passengers. This figure increased to **67%** of the fleet in **2003/04**.
- I.3 This guide is intended for use by all types of professionals involved in the planning, design and provision of bus stop infrastructure so that good practice can be applied consistently across Northern Ireland. Indeed, one of the main themes behind this guide is that the bus stop is viewed as a holistic environment rather than just somewhere for a bus to stop. This environment includes elements such as:
- Siting stops for the convenience of passengers;
 - Pedestrian access to and from stops including connectivity with footways;
 - Suitability of waiting area;
 - Shelters and seating;
 - Security and lighting;

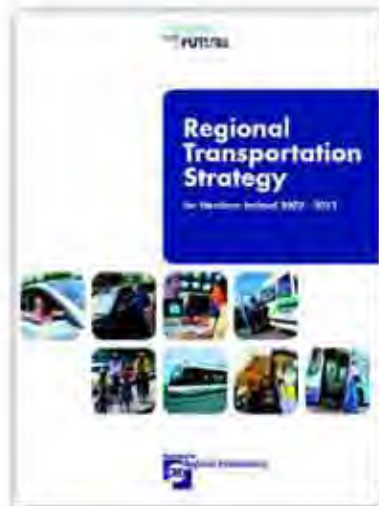
¹ *Bus Stops: A Design Guide for Improved Quality*

I. INTRODUCTION

- Information - timetables, route maps, service numbers;
- Bus stop pole and flag;
- Approach and exit paths for buses;
- Type and height of kerbs;
- Drainage; and,
- Surface markings for buses.

2. BACKGROUND

- 2.1 Since the publication of the previous guide, there have been significant policy and operational developments that have impacted on the accessibility of the public transport system.
- 2.2 The **Regional Transportation Strategy (RTS)**² established a new approach to transportation planning in Northern Ireland. The implementation of the initiatives contained in this strategy will, over the strategy period, make a significant contribution towards the achievement of the “vision” for transportation contained in the **Regional Development Strategy for Northern Ireland 2025 (Shaping our Future)**³. This is to “*have a modern, sustainable, safe transportation system which benefits society, the economy and the environment and which actively contributes to social inclusion and everyone’s quality of life.*”



Regional Transportation Strategy



Regional Development Strategy

² Regional Transport Strategy for NI 2002-2012

³ Regional Development Strategy for Northern Ireland 2025 (Shaping our Future)

2. BACKGROUND

- 2.3 The RTS confirmed the Department for Regional Development's (DRD) commitment to the promotion of equality of opportunity and to tackling factors leading to social need and social exclusion. It acknowledged that the transport system can present physical barriers that can deny travel opportunities to many people – particularly people with disabilities and older people. An outcome of the RTS is the publication of **An Accessible Transport Strategy (ATS) for Northern Ireland**⁴ which is “*about building in accessibility for older people and people with disabilities in all programmes of work.*”
- 2.4 In **2003**, Regulations were introduced in Northern Ireland to set accessibility standards for buses and coaches⁵, although Translink had been purchasing accessible vehicles for several years prior to this. The Government is continually striving to modernize Translink's bus fleet by investing in new state-of-the-art buses providing easy access for mobility-impaired passengers.
- 2.5 The RTS provides patronage targets and compliance with this Design Guide will contribute to this realisation. As one of the most readily visible parts of the bus operation, improving bus stops provides an ideal opportunity to show commitment to improving the entire service.

⁴ *An Accessible Transport Strategy for Northern Ireland, Department for Regional Development, April 2005*

⁵ *Public Service Vehicles Accessibility Regulations (NI) 2003, HMSO, 30 April 2003*

3.1 Bus stops should be located where they are convenient to use and the safety of passengers and other road users has been taken into account. All potential sites should be inspected for suitability by representatives of Roads Service, Translink's Bus Operations Division and the Police Service of Northern Ireland. In assessing the suitability of a potential site, the prime considerations will be road and pedestrian safety. Issues to be considered include environmental intrusion and road and pavement constraints. The following factors can influence the detailed location of a bus stop or bus shelter and should be taken into consideration at the planning stage:

- Proximity to adjacent junctions;
- Proximity to pedestrian crossings;
- Bends or crests in the road;
- On-street parking;
- Existing accesses to residential and business properties; and,
- Footway or verge width.

Designers should also be looking for sites where there is the opportunity to install shelters or lay-bys.

3.2 Representation from immediate frontagers should be carefully considered. In some circumstances, informal discussion with a local councillor may be helpful in resolving disputes. Any 'nuisance' for residents may be minimised by selecting sites adjoining gable walls or garden walls.

3.3 In addition, alternative sites for bus stops should be assessed to look at ways of maximizing their use. One method is an analysis of the catchment area (i.e. the number of residents within walking distance of the stop) using a Geographical Information computer Software (GIS) package such as 'MapInfo'. In this way, an economic assessment can also be undertaken to estimate the revenue that could occur if a bus stop is moved.

3.4 In designing new developments, any required bus stop sites should be located so that they are integral to the housing layout. It is important that the stops are established during construction of the roads and preferably before the occupation of adjacent premises.

3.5 Various authorities have suggested design standards for residential areas where walking distances to reach the bus stop vary up to a maximum of 400m. Clearly, convenience of location is of prime importance for existing bus users and to encourage new users.

3.6 This guide advocates the use of the accepted standard recommended in **Creating Places**⁶ that bus stops should be provided so that:

- No resident has to walk more than **400m** from their home to the bus stop;
- The majority of residents have no more than **200m** to walk between their homes and the bus stop;

⁶ *Creating Places – achieving quality in residential developments*

- In the case of residences designed specifically for the elderly and mobility impaired, there should be not more than **100m** between the development and the bus stop; and,
- Where there are gradients, the suggested walking distances should be reduced by **10m** for every **1m** rise or fall.

3.7 To maximise the catchment area, and wherever possible, the bus stop should be located close to the junction of the side road to meet the standards described above. Visibility requirements and road safety will however have to be given consideration in locating such a bus stop.

3.8 Where a bus stop is to be located close to a junction, the preferable location for it is on the leaving side of the junction (See **Diagram 3a**). This has the advantage that the presence of the junction keeps the approach to the bus stop clear of parked vehicles. Extra consideration needs to be given however to stops at locations such as this where it is likely that two buses could arrive at the same time. In such circumstances, additional length needs to be provided for the buses to clear the junction.

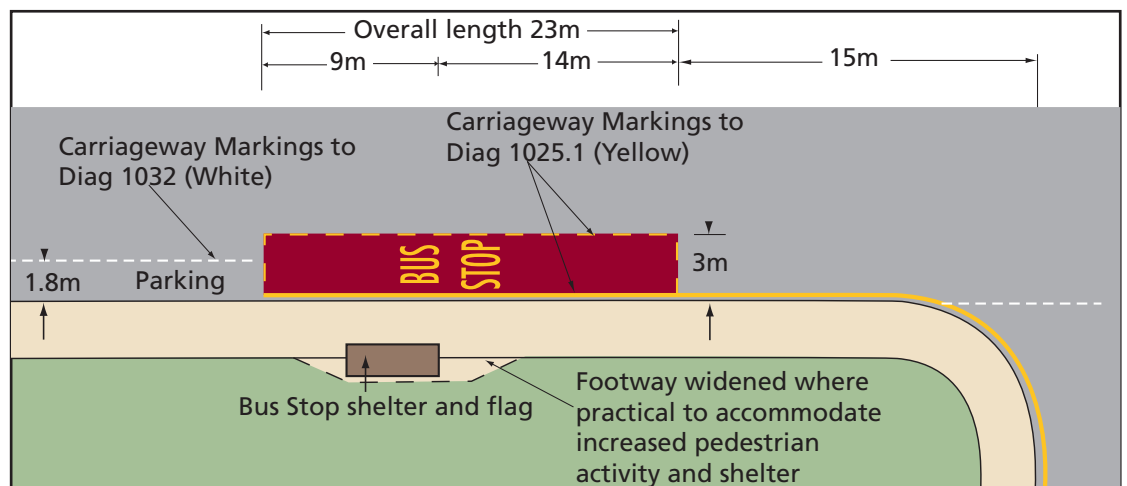


Diagram 3a – Bus stops near junctions

- 3.9 In relation to the spacing of bus stops along a bus route, the compromise is between minimising walking distances for residents on one hand and avoiding the extension of the overall journey time as the number of stops is increased on the other.
- 3.10 Bus stop spacing may be determined more by the frequency of side road accesses than by the distance travelled. A general indication of **250 - 350m** for bus stop spacing along the route may be quite adequate where there are few side accesses.
- 3.11 Bus stops should be located as close as possible to locations of passengers' destinations such as schools, shops, libraries, old people's homes, hospitals, railway stations etc.
- 3.12 Where bus stops are to be introduced on traffic-calmed routes, account should be taken of the bus stop's position to make allowance for buses needing to align with any speed cushions or other traffic-calming feature. There is also the possibility of incorporating bus stops into traffic calming features such as build-outs.
- 3.13 Many bus passengers need to cross the carriageway either before boarding or after alighting and general consideration should be given to providing facilities for pedestrians to enable them to cross the road safely and conveniently.

- 3.14 In relation to signalled controlled crossings such as Pelican, Puffin and Toucan crossings, it should be recognised that usage of bus stops and crossings may be interrelated. Safety considerations favour the placing of a bus stop on the leaving (downstream) side of the crossing (See **Diagram 3b**). The distance between the stop and the crossing depends on the 'controlled area' the length of which can vary in response to local road conditions.

NOTE: a bus stop may be placed within or partially within the downstream zigzag marking.

- 3.15 Placing the bus stop downstream from a Pelican, Puffin or Toucan crossing has the benefit of keeping the approach to the bus stop clear of parked vehicles, and therefore allows the bus to pull safely into the kerb. This also ensures that the bus does not block others drivers' view of pedestrians on or waiting at the crossing.

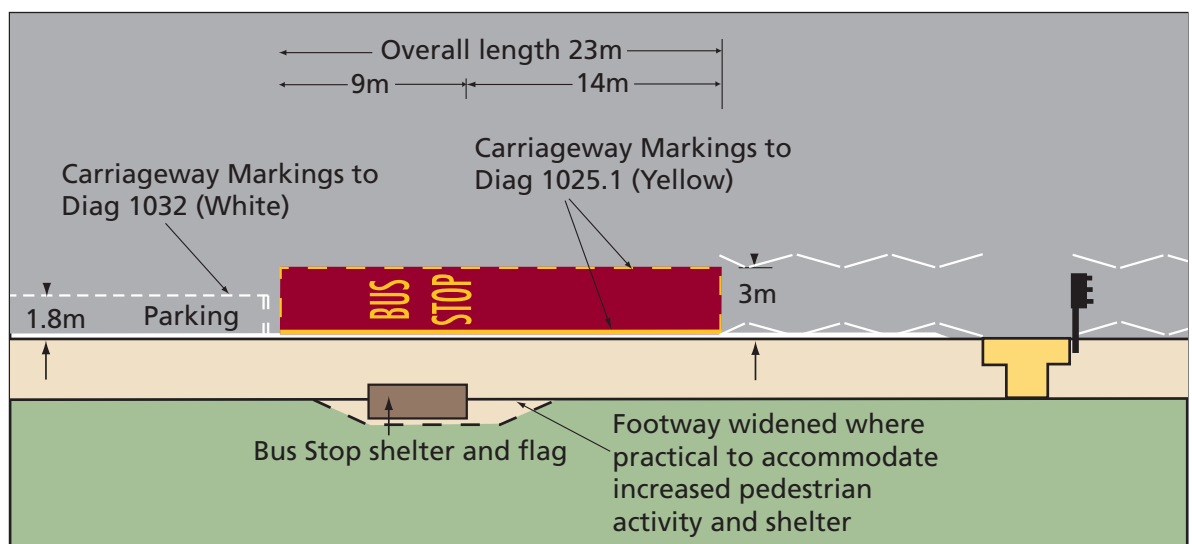


Diagram 3b – Bus Stops near to signalled controlled crossings

3.16 Care needs to be taken at Zebra crossings as a bus stopped at any location close to a Zebra crossing can block other drivers' view of pedestrians on the crossing. It is therefore not advisable to locate bus stops in the immediate vicinity of Zebra crossings.

3.17 It is generally not advisable to position bus stops opposite each other on a two-lane carriageway. Safety and sightline considerations suggest a **minimum** separation of three bus lengths (**36m**), with the stops positioned in such a way that the buses stop 'tail to tail' and move off away from each other (See **Diagram 3c**).

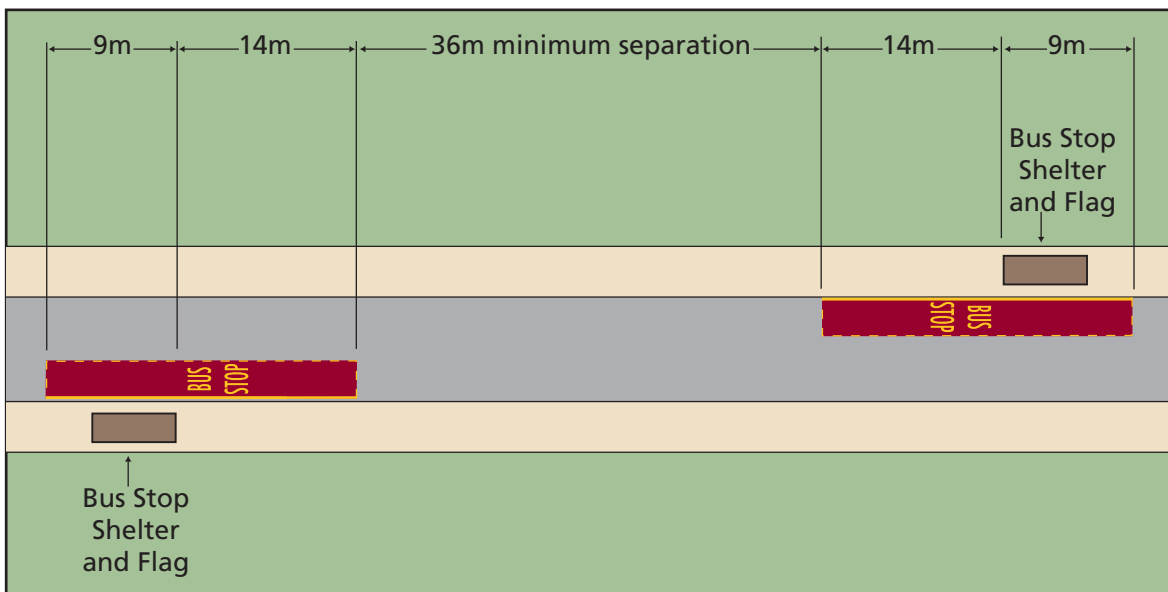


Diagram 3c – Bus stops on opposite sides of a two-lane carriageway

3.18 In the absence of any better alternatives, where there is a need for a bus stop close to a bend or the crest of a hill, there may be cause for concern on safety grounds that the bus or its intending passengers may be at risk from other vehicles. In such cases, consideration should be given to an advanced warning sign. Such a sign will require Departmental approval and authorisation by Road Service.

- 3.19 It is preferable that bus stops be positioned away from local drainage facilities such as gullies. Slotted gratings can present difficulties for people with walking aids and those wearing shoes with pointed heels. Gullies can also block causing ponding which can be a major inconvenience to waiting passengers.
- 3.20 In rural locations, consideration should be given to how the passengers get to and from the stop. It is recommended that hard standings should be provided at all rural stops for people to wait on.

4. BUS STOP SIGNAGE

- 4.1 Historically, bus stop signs were not regarded as traffic signage for design control purposes until the '**Worboys' Committee Report (1963)**⁷, which produced the current style of traffic signage. This committee specified a standard bus stop sign with the '**BUS**' pictogram and the words "**BUS STOP**." Permitted additions included - location name, bus operator's name and service numbers. A range of sizes was offered within the specification, recognising that needs varied between urban and rural applications.
- 4.2 Although the British standard sign was not adopted in the **Traffic Signs Regulations (Northern Ireland) 1979**, (nor indeed in the revised **Regulations, 1997**), Ulsterbus/Citybus voluntarily adopted the standard design around the mid 1970's, which was then progressively introduced throughout the province. There was a major effort between 1989 and 1991 to upgrade sign quality and to replace signs of outdated design. Initiatives such as Rural Transport Plans, QBC's etc; standardised signs are now in widespread use (See **Photos 4a**).



Photos 4a – Examples of permitted signs

⁷Worboys' Committee Report (1963)

BUS STOP SIGNS

4.3 The information which needs to be conveyed by bus signage falls into two groups:

- (1) That required for driver recognition; and,
- (2) That required for customer information.

4.4 The following information may be included in the sign (see **Photos 4b**):

- Operator Logo and route branding, e.g. “**Metro**” and, where appropriate, unique Bus Stop reference number;
- The words “**Bus Stop**” and/or a “**Bus**” pictogram;
- Location name;
- Miscellaneous information, e.g. fare stage or zone name, number or information;
- Information on time restrictions relevant to the stop, e.g. “**After 9 a.m. only**”;
- A tablet of service numbers; and,
- Call centre number and web site address.



Photos 4b – Typical Metro flags

4. BUS STOP SIGNAGE

- 4.5 Bus stop signs should be clearly visible to pedestrians and bus drivers by being located above road traffic, pedestrians and street furniture. The bottom of the sign should not be less than **2.5m** above ground level and the sign not less than **450mm** wide and **620mm** high (See **Diagram 4c**). It is recognised that in certain situations higher mounting positions have been successful in deterring vandalism.

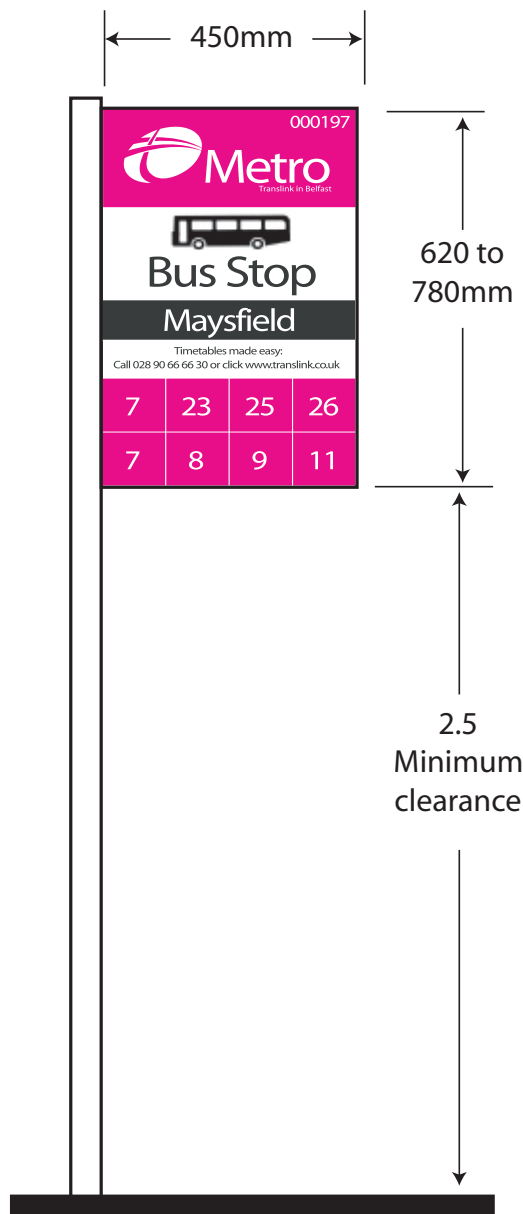


Diagram 4c - Standard bus stop pole and flag

BUS STOP POLES

- 4.6 Basic bus stops consist of a simple vertical pole with a 'flag' sign attached to it. Whilst this is the simplest form of sign to erect and maintain, it is considered to lack prominence and image in urban situations (See **Photos 4d and 4e**).



Photo 4d - Typical bus stop pole and flag



Photo 4e - Quality Bus Corridor pole and flag

4. BUS STOP SIGNAGE

- 4.7 Bus stop signs should be attached to bus shelters above roof level wherever possible. To minimise street clutter and to avoid creating additional hazards for the visually impaired, where there is no shelter, bus stop signs should be attached to existing poles such as street lighting columns, where there is a suitably sited item available. This may not be permitted if other signage exists and if certain utilities do not permit the attachment of bus stop signs to their poles. If the total area of signage exceeds **0.3m²**, the sign, pole and base will need checked in line with the Department's Technical Approval for Structures scheme.
- 4.8 Bus stop poles should be positioned so that they cause the least possible obstruction to boarding or alighting passengers and to passing pedestrians, with the optimum location of the pole being at the back of the footway and the flag pointing towards the road (See **Photos 4f and 4g**). If the pole must be erected close to the road edge, it should be positioned so that the flag points inwards, away from the road and does not hang over the carriageway. No part of the pole or flag should be closer than 450mm from the face of the kerb line.



Photos 4f and 4g – Bus stop poles at back of footways

- 4.9 To help passengers, especially the visually impaired, to distinguish bus stops from other street furniture, bus stop poles may be of distinctive design or contrasting colour with the background. If bus stops are attached to other poles or structures, colour banding will help identify them. The Department for Transport's guide **Inclusive Mobility**⁸ provides comprehensive details.



Inclusive Mobility

⁸ *Inclusive Mobility, A Guide to Best Practice on Pedestrian and Transport Infrastructure*

5. TRAVEL INFORMATION

5.1 It is generally accepted that amongst the largest deterrents to using public transport is the lack of information about the services on offer. This has been recognised by Translink who provide a dedicated telephone enquiry service (**028 9066 6630**) between 7 a.m. and 8 p.m., as well as full journey planning facilities, timetable and key fares information on their website - **www.translink.co.uk**.

5.2 Where provided, a timetable display case (See **Photos 5a and 5b**) should be attached to the pole at a convenient level for reading.



Photo 5a – Timetable display case Photo 5b – Info panel on bus stop pole

5.3 Display panels should be located between **0.9m** and **1.8m** above ground level. Where longer panels are required, the height should not exceed **1.9m**, with the most important information located no higher than **1.7m** so that wheelchair users can read them.

5.4 The information displayed should be readily visible at all times and opportunities for using existing street lighting should be maximised. The following may be included in the information display:

- Service number;
- Destination;
- Points served;
- Timetable;
- Route details;
- Information on fares;
- Information on alternative stops or services for selected destinations or times of day;
- Information promoting travel by public transport;
- Announcements about temporary alterations to services, routes, or stopping places; and,
- Maps or diagrams for routes or local stopping arrangements.

5.5 For frequent local services details of routes, destinations and a timetable may be sufficient; but for passengers unfamiliar with the service a full timetable and route diagram are more helpful and these may be regarded as essential for longer or infrequent services. For busy bus stops, stations and interchanges the provision of the following types of information should be regarded as good practice:

- Stop / Station / Interchange name;
- Usage of bus frequencies rather than times;

- Route information including stops;
- Journey length of details; and,
- Fare information – if practicable.

At less well-used bus stops include:

- Stop name;
- Which buses stop there;
- Where they go;
- How frequent they are; and,
- The time of first and last buses.

5.6 Fares information, if provided, encourages passengers to have the ‘exact fare’ ready before they board, helping to reduce bus-stopping times. However, fares information must be updated promptly when fares are revised, otherwise, advertising legislation may be breached. The use of ‘Smartcards’ should be encouraged as they offer convenience to both the bus passenger and bus operator. Prepaid Smartcards reduce the number of on-board cash transactions which shortens boarding times and consequently improves overall bus speeds and journey times. Removing the need to have money on the bus makes it safer for both the driver and the passenger.



Translink Smartlink cards

ELECTRONIC PASSENGER INFORMATION SYSTEMS

- 5.7 Electronic passenger information systems will display the times; destinations and service numbers of successive buses as they are due to arrive at the stop (See **Photos 5c and 5d**). These may be based on ‘scheduled times’ triggered by a pre-determined database of bus service timetables, or ‘real time’ which are activated by prior detection of the actual buses approaching the stop, predicting the arrival/departure times and automatically responding to delays or irregularities. Visual displays of this type must be clear under all lighting conditions (including bright sunlight) and easily understood.



Photo 5c – Electronic passenger information display



Photo 5d – Electronic passenger information display flag.

PLANNING REQUIREMENTS

- 6.1 Planning permission is not required under the Planning (General Development) Order NI 1993, by Road Passenger Transport Undertakings (Class E, Permitted Development), i.e. Translink, for the installation of bus stop poles, flags and shelters or by District Councils (Class A, Permitted Development) for public shelters. However, the erection or alteration of bus shelters by other parties such as advertising companies, unless specifically acting as agents or contractors to the above bodies, will require submission of a formal application for planning permission.
- 6.2 Material displayed by Translink that is required for the safe, efficient operation of the undertaking is deemed to have ‘advertising consent’. Illumination should not be used unless ‘reasonably required’ to read the information. This includes direction and safety signs and displays of information for intending passengers. Other advertising or promotional material not specific to the services at the stop is not permitted under the ‘deemed consent’.
- 6.3 Display of commercial advertising not related to the public transport undertaking, requires formal application for ‘advertising consent’.
- 6.4 For the erection of bus shelters in Conservation Areas, it is advisable that DOE Planning Service should be consulted prior to the submission of the Planning Application to ensure the design of a bus shelter is in sympathy with local surroundings.

6.5 Planning Service has produced **A Document of Planning Principles With Regard to the Erection of New and Replacement Bus Shelters**⁹ (See **Appendix I**). This sets out the policies and issues that will be taken into consideration in the submission and determination of applications for bus shelters.

GENERAL REQUIREMENTS

6.6 Shelters should be designed and sited to provide maximum weather protection, bearing in mind the prevailing winds and the need for protection against splashes from passing vehicles.

6.7 Shelters can also be designed to provide weather protection for pedal cycles (See **Photos 6a and 6b**).



Photo 6a – Shelter for pedal cycles

⁹ A Document of Planning Principles With Regard to the Erection of New and Replacement Bus Shelters



Photo 6b – Shelter for pedal cycles

- 6.8 Waiting passengers must have a clear view of approaching buses, and be themselves clearly visible to bus drivers and passers-by.
- 6.9 Shelters should provide minimum obstruction to the pavement, and a recommended width of **1.8m** should be allowed for passing pedestrians. There should be at least **0.5m** clearance between any part of the shelter and the kerb edge. The shelter should have no projecting sections or sharp corners that would create a hazard to pedestrians. Although designs should not visually clash with their surroundings, there should be sufficient use of bright colour contrast to identify the shelter to those with visual impairments. Further specific siting details for disabled passengers are available from the **Inclusive Mobility**⁸ guide.

- 6.10 Where glass is used to provide a light interior, it should have a tonally contrasting band **140 - 160mm** wide at a height of approximately **1.5m** from the ground to improve visibility. This band can possibly incorporate either the Translink or shelter provider's name and/or logo.
- 6.11 Shelters should be constructed from vandal resistant materials that are easy to clean and need minimum maintenance. Materials and designs used should be of standard size, shape and type to allow easier maintenance.
- 6.12 A bus shelter should not be sited where it might cause obstruction to passengers who are boarding or alighting or obstruct sight lines for other drivers.
- 6.13 Combining bus shelters with commercial advertisements or public telephones (so long as these do not have priority over bus service information) will reduce costs, minimise footway obstruction, and facilitate lighting the shelter at night, thereby reducing passenger fear of assault. Any shelter without lights should be sited in open, well-lit areas. In addition, all new enclosed shelter designs should have entrance and exit choices which avoid entrapment.
- 6.14 Passenger information displays should be mounted on the shelter and the bus stop flag fixed to the shelter above roof level to do away with the need for a bus pole and thereby help reduce street clutter.

- 6.15 The long-term objective is to provide a shelter at as many bus stops as possible. Priorities in the short and medium term should be given in proportion to the volume of usage by boarding passengers, especially schoolchildren and the elderly, and the degree of exposure to wind and driving rain.
- 6.16 There is an almost infinite range of design styles and materials available for shelter manufacturing and construction. It is not the purpose of these guidelines to be prescriptive of materials or designs. However, we do recommend that careful consideration is given to the options available, having regard to the aesthetic qualities required for the site and, to long-term durability and maintenance.
- 6.17 Shelters can vary greatly in dimensions according to likely demand and usage. In general, it is recommended that **minimum** dimensions of **1.5m x 4.0m** for cantilever styles and **2.0m x 4.0m** for enclosed designs are used (See **Photos 6c** and **6d**). Larger dimensions should be provided where above average usage is anticipated, such as key stops in residential developments and at town/city centres or route or modal interchanges.
- 6.18 In exceptional cases, the bus stop layout may be designed to provide for passengers to step directly between the bus doorway and the shelter. In such cases, the shelter should have an open front of at least **3.0m** to allow for variation in bus stopping positions and, an independent means of access to the footpath, preferably towards the oncoming vehicle or towards the rear of a stationary bus.



Photo 6c – Typical shelter



Photo 6d – Rural shelter

- 6.19 In Northern Ireland, a variety of authorities are involved in the erecting and maintaining of bus shelters, including - Roads Service, District Councils, adjoining landowners, Translink and advertising companies (see points **6.27 - 6.29** for details of Roads Service's contract with Adshel). However, the siting of bus shelters must be agreed between Roads Service, Translink's Operations Division and the PSNI. The exact positioning is subject to road safety considerations similar to those expressed for bus stops in point 3.1. Consideration may also be required for access to or maintenance of adjacent property and to any potential 'nuisance' to residents.
- 6.20 At important locations or interchange points, the opportunity should be considered to install 'Super Shelters'. These have more comprehensive information displays, larger sheltered areas and other passenger facilities such as - public telephones, a direct information hotline and coin-operated drinks machines (see **Photos 6e** and **6f**). There will be places where a bus station is not appropriate or possible, but where attractive waiting facilities are needed to achieve comparable objectives on a more modest scale.



Photo 6e – Example of 'Super Shelter' at Antrim Area Hospital



Photo 6f – Example of ‘Super Shelter’ at Causeway Hospital, Coleraine



Photo 6g - Solar-powered shelter

- 6.21 Another type of shelter, which could be particularly useful in rural settings where there is little chance of electricity supply, is the solar-powered shelter (See **Photo 6g**). These can provide lighting for display panels and timetables as well as heating for seats.

SEATS IN SHELTERS

- 6.22 Unless services are very frequent or stops very rarely used, seats should be provided in all shelters. Many passengers such as the elderly or those with mobility impairments may be able to walk to or from their nearest bus stop, but find it impossible or very painful to stand waiting.
- 6.23 Typically, seats should be provided as a bench or horizontal rail to provide waiting passengers with something to sit on, rest against, or ‘perch’ on. Whenever possible, sharp edges and corners should be avoided (See **Photo 6h**).



Photo 6h - Typical shelter with perch seat

- 6.24 Dimensions for seats:
- For ‘perch’ rails – approximately **700mm** above ground level.
 - For other seats – approximately **450mm** above ground level.
 - If seats are used – arm rests, if provided, should be **200mm** above seat level and be sufficiently robust to allow passengers to push themselves up from the seat.
- 6.25 Benches and seats should be in bright, ‘warm’ materials with a non-slip surface, which is strong, easy to clean, and (in exposed positions) quick to dry. Slatted wood or plastic coated metal meet these requirements.
- 6.26 In all shelters, and for obvious reasons, consideration should be given to the provision of litterbins and regular cleaning and maintenance are essential.

BUS SHELTER CONTRACT

- 6.27 As part of the Department’s aim to encourage the use of public transport, Roads Service has awarded a **15-year** contract to Adshel (who are part of the Clear Channel Advertising Group) to provide new bus shelters and associated infrastructure. This contract commenced on **1st January 2001** and currently includes all Council areas with the exception of Fermanagh and Derry.

6.28 Under this bus shelter contract, at no charge to the Department, Adshel:

- Can erect shelters with advertising at bus stops where they believe there is an advertising demand;
- Must replace existing advertising shelters with new, good quality, well-lit shelters;
- Allocate the Department credits for every advertising shelter replaced or newly erected that can be used to provide non-advertising shelters at locations agreed by Roads Service, Translink and District Councils; and,
- Are also required to maintain each advertising and non-advertising shelter erected under the contract for the duration of the contract.

6.29 The contract uses four main types of shelter throughout Northern Ireland:

- **Insignia** – the most commonly used shelter.
- **Sigma** and **Heritage** – Used in Conservation Areas and where required by Planning Service.
- **Landmark** – Used on Quality Bus Corridor routes.

BUS SHELTER TYPES



Insignia	
Height	2370mm
Length	4600mm
Depth	1515mm

Specific Features

- Established design with proven track record
- Aluminium cladding
- 3 Style options



Sigma	
Height	2600mm
Length	5522mm
Depth	1600mm

Specific Features

- Tinted barrel-vaulted roof
- 2 style options
- Striking and elegant design



Heritage	
Height	2800mm
Length	5240mm
Depth	1588mm

Specific Features

- Classical appearance
- Modular design
- Wooden seating



Landmark	
Height	2430mm (without roof)
Length	5310mm
Depth	1910mm

Specific Features

- Highly flexible and modular design
- Glass or composite roof options
- Contemporary stainless steel structure.

KERBING

- 7.1 Convenience of access to buses requires that the bus draws up close to and parallel with the edge of the footway so that passengers can step easily across between the kerb and the bus platform. For many passengers serious difficulty arises if they are obliged to enter or leave the bus from carriageway level.
- 7.2 The current trend in bus design is the ultra-low floor type, in which steps or ramping within the vehicle is virtually eliminated, consequentially benefiting passengers with mobility impairment. Such designs also facilitate movement of a wheelchair within the vehicle. However, the problem of access to the entrance step itself remains, and the arrival of the low floor bus concept has increased awareness of the importance of achieving consistent high quality access between footways and the bus entrance step.
- 7.3 The low floor bus typically has a step height of between **300mm** and **400mm** above carriageway level and whilst the kneeling mechanism on the suspension lowers the entrance step by **50 - 80mm**, it does not totally resolve the difficulty faced by some in boarding from or alighting to the footway. Furthermore, activation of the kneeling system takes time, which extends bus stopping times, slowing journeys by public transport and extending delays to following traffic, and is therefore used only when there is an obvious need or when it is requested.

- 7.4 The recommendations contained in this guide are designed to facilitate targets for access, comprising of step height from kerb to (kneeling) bus platform not exceeding **150mm** and lateral gap from kerb face to bus platform not exceeding **200mm**, without either the front or rear overhang of the bus overrunning the footway during either approach or departure (see **Diagram 7a**).
- 7.5 It is clear that to achieve these targets, passengers must board from or alight to a kerb height footway, not an area at carriageway level.
- 7.6 In establishing an optimum height for the kerb, it is necessary to find a compromise between, on one hand, the objective of raising the footway as near as practical with the entrance platform of the low floor bus (in kneeling mode), and on the other hand, the objective of avoiding the risk of physical contact of parts of the bus with the actual kerbstone.
- 7.7 Based on an analysis of Translink's current fleet and general industry trends, it is recommended that a kerb height of **125mm** will reduce the potential 'grounding' by the latest generation of low floor vehicles.
- 7.8 European cities have experimented with higher raised kerb areas at bus stops to achieve level access to floor height of low floor buses. The experimental kerb height is **280mm**. This is significantly more than the 'normal' kerb height and raises safety issues for pedestrians, as well as serious damage risk to

buses if a parallel approach is not consistently practical. Some operators lessen the risk of damage by fitting guide wheels to the bus, thereby preventing physical contact between the kerb and the bus. Overall, the stop infrastructure design requires more space than is generally available in our situation. For these reasons adoption of this practice is not recommended for Northern Ireland at present unless this or an equivalent 'docking' technology is incorporated within a segregated busway network such as is proposed for EWAY.

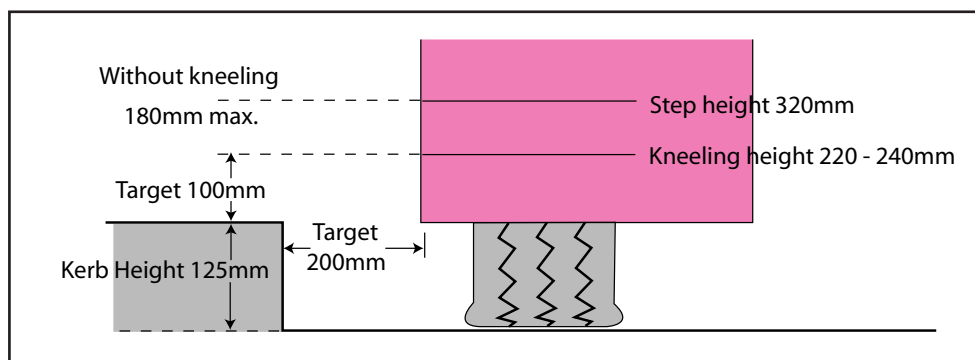


Diagram 7a – Example of bus kneeling

- 7.9 Whilst buses with a single entrance/exit doorway are in use, a recommended length of kerbing of **5m** should be available for boarding and alighting. Where this is not possible, a **minimum** of **3m** should be provided. Buses with separate entrance and exit doors will require at least **10m** clear length kerbing.
- 7.10 Dropped kerbs or flat kerbstones should **NOT** be used in the immediate area of a bus stop or in the parallel face of a bus lay-by. Any facilities for uncontrolled or informal pedestrian crossings should be located at least **15m** from the bus stop, and preferably to the rear of the bus stopping position. In addition, the avoidance of conflict with property entrances should be considered in placing the bus stop, as these also require dropped kerbstones.

EASY ACCESS KERBING

- 7.11 Special kerbing (See **Photos 7b and 7c**) has been designed to improve access for bus users as well as providing docking guidance for vehicle drivers in order to minimise the horizontal separation between the bus and the footway. It allows the vehicle to make low speed close contact with the kerb in a parallel direction without causing damage to the tyres. Where possible these kerbs should be used as part of a comprehensive whole route treatment, for example, on Quality Bus Corridors.



Photo 7c – Easy access kerbs used in bus boarder

7.12 Specification of these kerbs with a maximum kerb show height of **160mm** is ideal for low-floor buses to get as near as possible to the kerb, but kerbs higher than **125mm** may cause damage to the underside of a low-floor bus if it has to approach at an angle. To avoid this easy access kerbs or similar should be considered in the following situations:

- Bus boarders/footway build-outs;
- Conventional bus lay-bys with straight section dimension of **15m** or more;
- Shallow sawtooth lay-bys;
- Straight kerb edge bus stop locations where parked vehicles are unlikely to interfere with the bus approach; and,
- Road narrowing (traffic calming) features.



Photo 7c – Easy access kerbs used in bus boarder

7.13 Easy access kerbs are not appropriate where there is a likelihood of front or rear overhang or sharp angle tyre impact as they are designed for parallel running. They are also not appropriate where car parking may prevent buses approaching parallel with the kerblines. For the same reasons, lengths of this kerbing or similar should be introduced with a specially designed leading corner or transition stone and/or a lead-in taper so as to negate a sharp angle tyre impact (see **Photo 7d**).



Photo 7d – Easy access radius and transition kerbs

7.14 To facilitate the bus making a parallel approach to the kerb the recommended minimum length of easy access kerbing is:

- **4m** at lightly used or alighting bus stops;
- **8m** at single bus stops where only one bus is scheduled to arrive at any one time and a standard shelter is provided;
- **16m** at a double bus stop; and,
- **28m** at a double bus stop used by standard (**12m**) and articulated buses.

These lengths do not include for transition kerbs.

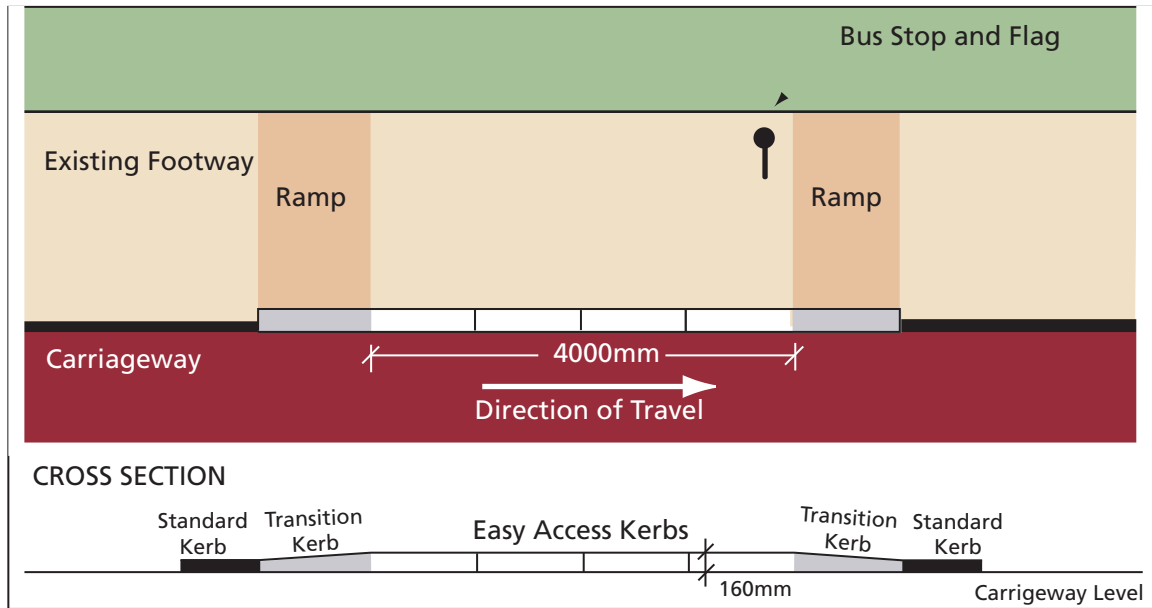


Diagram 7e - Easy access kerb layout

- 7.15 To avoid tyre impact damage, all build out features at bus stops (and other locations on bus routes), should have leading corners designed and constructed with radius corners and **NOT** mitred corners.
- 7.16 The surface design and texture of these easy access kerbs gives both a visual and tactile warning of the footway edge providing increased pedestrian safety whilst the curved, smooth kerb face means that tyre wear is significantly reduced. In addition, it is claimed that their introduction can reduce dwell time as there is a compatible height between bus and footway thereby enabling people with buggies, wheelchairs and other mobility difficulties to alight and board quicker and more safely (See **Photos 7f and 7g**).



Photo 7f – Easy access kerbing



Photo 7g – Close-up of easy access kerbing

FOOTWAYS AND HARD STANDINGS

- 7.17 Footways should be hard surfaced, well drained and lit. If it is proposed to install a bus stop on an adopted grass verge, hardstanding provision should be made for boarding and alighting passengers. The area of verge/footway adjacent to bus stops should be kept clear of street furniture and other obstructions, and a good quality kerb and paving surface maintained.
- 7.18 The use of 'modified blister' tactile paving, approved by the Department, is intended to assist identification of pedestrian crossing points for visually impaired people to highlight the absence of kerb height at this point. Use of this paving in the immediate vicinity of bus stops would be misleading and potentially hazardous and is therefore **not** recommended.
- 7.19 In general, the recommendation for footway width in the vicinity of a bus stop is **3m**, to allow for queuing and alighting passengers as well as passing pedestrians. Local reduction of this dimension to **1.8m** may be acceptable where pedestrian movement is low. Consideration must be given to the needs of wheelchair users accessing the bus stop and space requirements for manoeuvring on and off any boarding ramp that may be fitted to the bus.
- 7.20 As previously mentioned in paragraph 3.20 this guide recommends that hard standings be provided at all rural stops. A systematic route-by-route approach should be employed to achieve this.

BUS BOARDERS AND FOOTWAY BUILD OUTS

- 7.21 In the traditional urban traffic environment there may be pressure on kerbside space due to parking and loading, bus drivers often encounter great difficulty approaching the kerbside at stops. Often buses are obliged to stop in the running lane forcing passengers to step down to carriageway level, while intending passengers have to negotiate their way between parked vehicles to board the bus, and to step up from carriageway level.
- 7.22 Where such circumstances exist, a built out footway called a 'bus boarder' may improve the situation. These can be used to provide a kerb height boarding/alighting area for bus passengers with minimal reduction in kerbside parking. It is recommended that easy access kerbs should be used wherever possible. Alternatively, a physical feature to control kerbside parking over a longer length will allow a bus to move partly off the running lane and stop close to the kerbside, offering some opportunity for other vehicles to overtake.
- 7.23 Bus Boarders can be most useful in two main situations:
- Where a car-parking bay has been constructed alongside the main carriageway.
 - Where on-street parking prevents access to the kerb, a physical build out may be required so that the bus can access the kerbline while still pulling over from the centre line further than would otherwise be possible.

7.24

Where car-parking bays are present along a route a short build out between car parking spaces will be sufficient to allow the bus doorway to stop adjacent to the kerb. A straight kerb length of **3m - 5m** is recommended (See **Photo 7h** and **Diagram 7i**). Where footway width is very limited, and in order to accommodate waiting passengers, a longer build out **minimum 10m** - desirable **12m** - will permit the installation of a passenger shelter without obstructing the footpath (See **Diagram 7j**). These dimensions may require to be extended if front entrance/centre exit buses are reintroduced in Northern Ireland.



Photo 7h – Bus boarder between parked cars

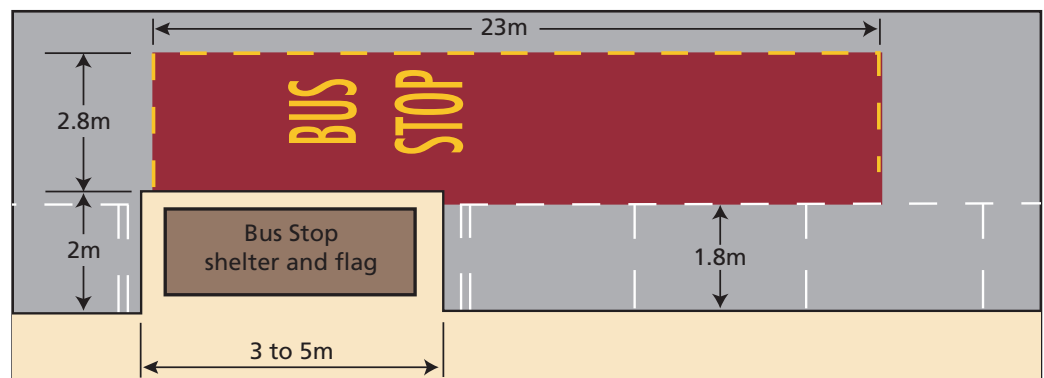


Diagram 7i – Bus boarder between parked cars

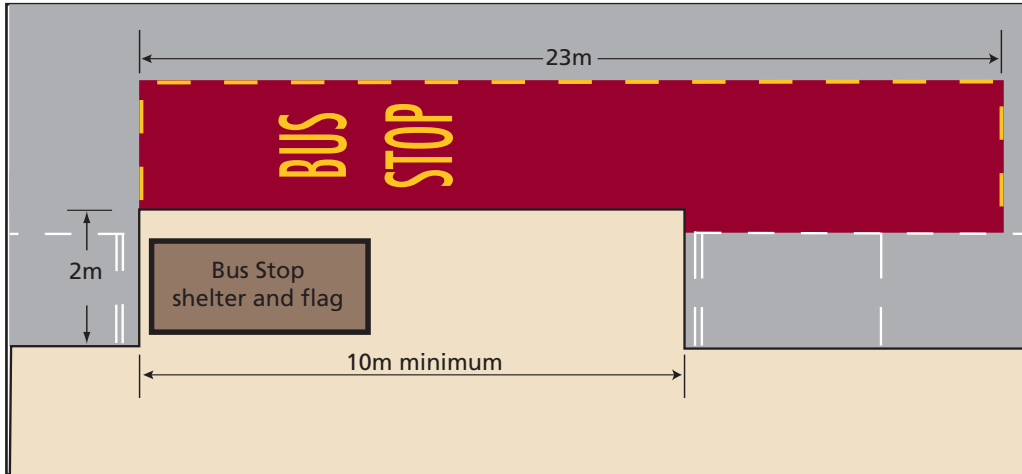


Diagram 7j – Bus boarder with shelter

7.25 Alternatively, where on-street parking is restricting bus access, two types of bus boarder build outs can be considered:

- The full width bus boarder (approximately 2m deep as in **Diagram 7k and Photo 7l**); and,
- The half width bus boarder (approximately 1m deep as in **Diagram 7m**).

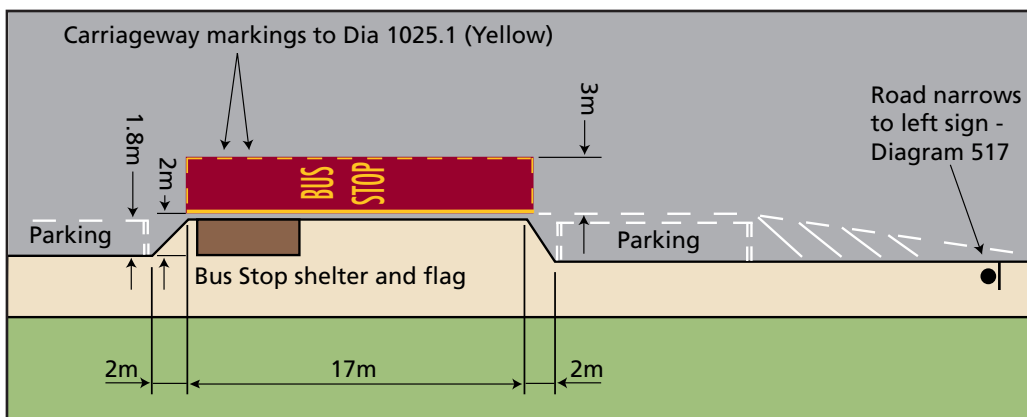


Diagram 7k – Full width bus boarder



Photo 7i – Full width bus boarder

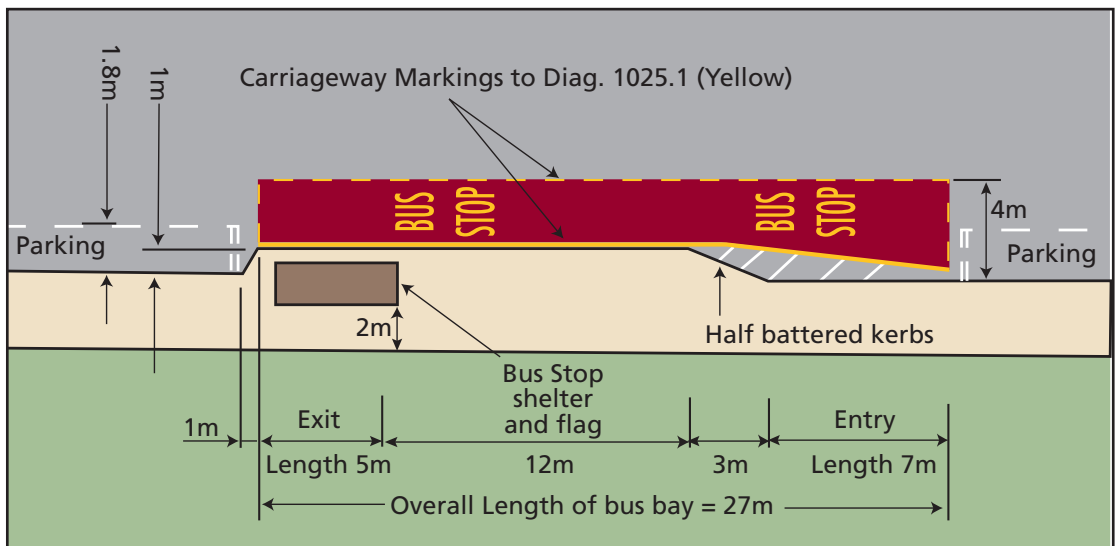


Diagram 7m – Half width bus boarder

7.26 Consideration should be given to the safety implications of constructing a bus boarder on free-flowing traffic when there is no parking in the vicinity. It may be necessary to include reflective marker bollards in the design of these bus boarders. In general, such bollards are recommended where the bus boarder projects more than 1m into the carriageway. Reflectorised bollards should be **1.0m** high and incorporate a clear colour contrast with the general environment. ‘Edge of carriageway’ and ‘hatching’ markings may also enhance safety.



Photo 7n – Alternative bus boarder

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

- 8.1 In this section, geometrics are based on the 12m European standard length bus which is widely used throughout Northern Ireland. Regard has been paid to the increasing presence of low floor buses, which by current planning will ultimately become the standard vehicle for urban areas. However, it is also necessary to have regard to the requirements for European style 18m long articulated buses, which are already in use on a limited number of urban and interurban routes in Northern Ireland.
- 8.2 Although current buses in Northern Ireland are standardised on a combined entrance/exit doorway at the front of the vehicle, the standard in Europe includes a centrally placed exit doorway and this feature may need to be taken into account in the future.
- 8.3 It is acknowledged that in urban areas the kerbside must cater for pedestrian crossings, service vehicles and short term parking as well as bus stops and that junction approaches must also be protected to safeguard sightlines. Therefore kerbside space is at a premium and it is important that the kerbside space requirements for bus operation should be kept to a minimum consistent with the achievement of reliable and consistent access to bus transport.
- 8.4 Very often, the bus is physically unable to access the kerb, sometimes because of infrastructure design such as car-parking bays, and due to parked vehicles encroaching upon the bus stop area (See **Photo 8a**).



Photo 8a – Parked vehicles obstructing bus stop

8.5 Difficulties due to inconsiderate parking have often made it impossible for buses to approach the kerb side and bus drivers have over many years, been accustomed to having to stop well out into the carriageway to set down or pick up passengers.

8.6 In addition to the physical measures required to overcome the underlying problem, there is also a major training and attitudinal task required to ensure that bus drivers are convinced of the justification for taking the trouble to ensure good bus to kerb alignment.

NOTE ON TERMINOLOGY

8.7 There is some disparity between the terminology used in Northern Ireland and that used in other regions of the UK. For example, 'Bus Bay' is used in Northern Ireland to denote the rectangular carriageway markings alongside a conventional kerbside bus stop. Elsewhere, the same term can refer to a bus stop set into a recessed kerbing. This is usually known as a 'bus lay-by' in Northern Ireland.

- 8.8 To avoid ambiguity, this guide has used the Northern Ireland meanings i.e. –
- **‘Lay-by’** - refers to a recessed kerb layout;
 - **‘Bus Bay’** - refers to carriageway marking in front of conventional kerblines.
 - **Double bus bays** should have a full length of **23m** – i.e.; **10m** prior to entry taper and **5m** after the exit taper should be kept free from parked cars.

NOTES ON CARRIAGEWAY MARKING

- 8.9 The standard ‘Bus Stop’ carriageway marking comprises of a rectangular box parallel to the kerbside and contains the words **“BUS STOP.”** The **Traffic Signs Regulations (Northern Ireland), 1997¹⁰**, permit this marking to be laid in yellow. This marking is supported by a 24-hour parking ban, (See **Diagram 8b**). A corresponding marking exists for bus stops located in a lay-by, (See **Diagram 8c**).

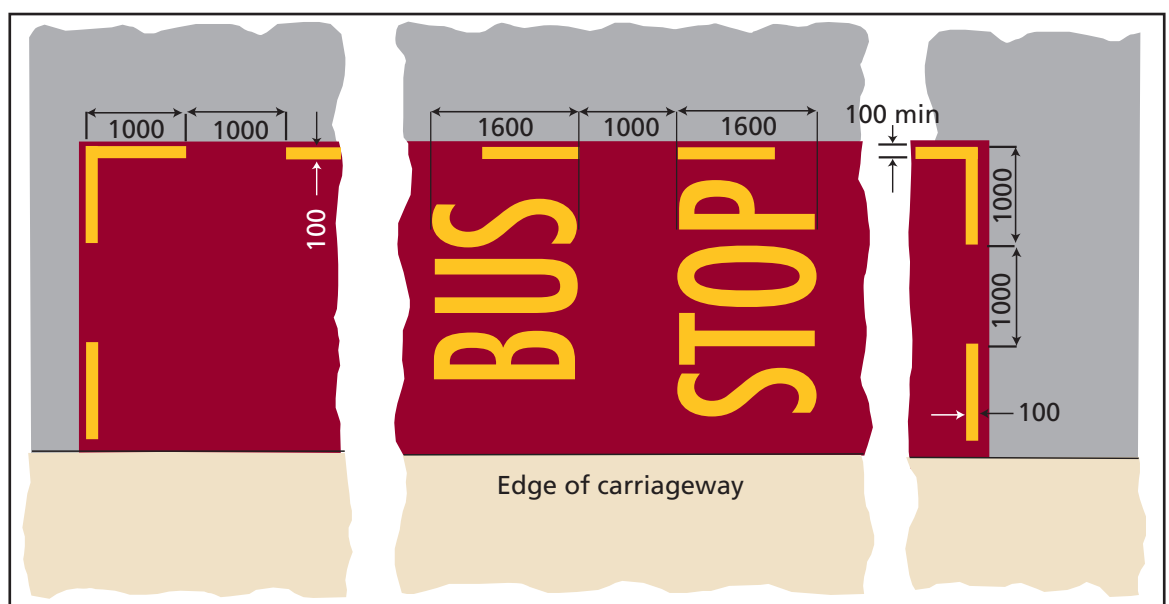


Diagram 8b – Bus bay carriageway markings

¹⁰Traffic Sign Regulations (Northern Ireland), 1997

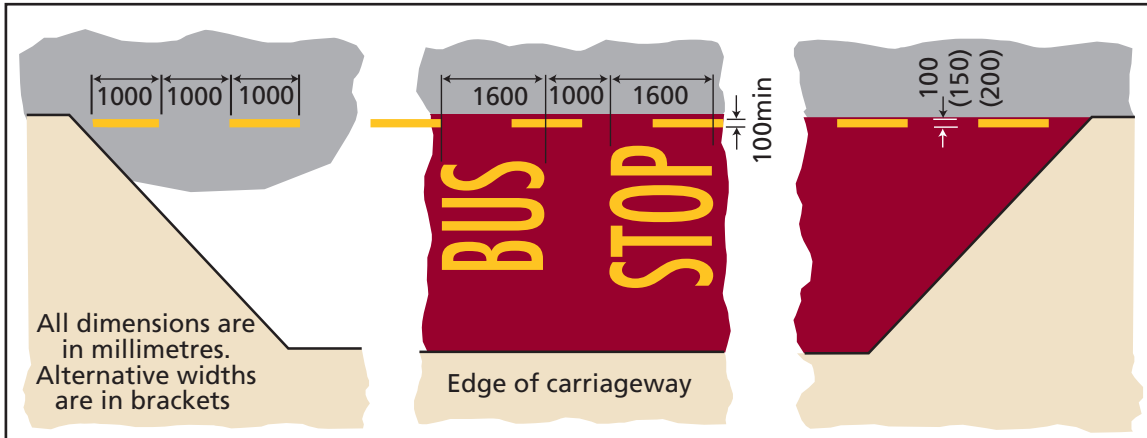


Diagram 8c – Carriageway markings for standard bus bay

8.10 The Regulations also allow for an additional form of carriageway marking with a single broad yellow line applied alongside the kerb. This is shown in **Diagrams 8d** (straight kerb) and **8e** (lay-by). The legislation for this marking provides a ban on parking within the marked length for a specific period less than **24 hours**. Each application requires individual advertisement providing an opportunity for objection. There is a legislative requirement to sign the prohibitions for the additional yellow kerblines. These lines offer enhanced prominence and visibility. It is generally considered that a blanket **24-hour** ban on parking is not required, and only leads to non-compliance, thus bringing the system into disrepute. This alternative form of marking will allow the prohibition to be more targeted and therefore more enforceable.

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

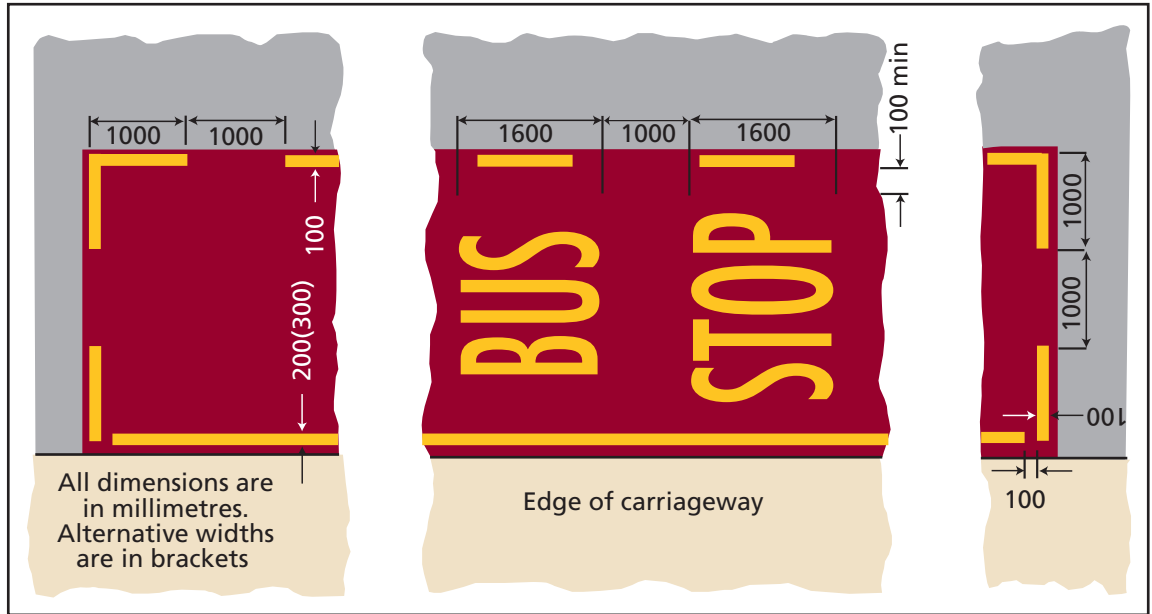


Diagram 8d - Marking for straight kerb

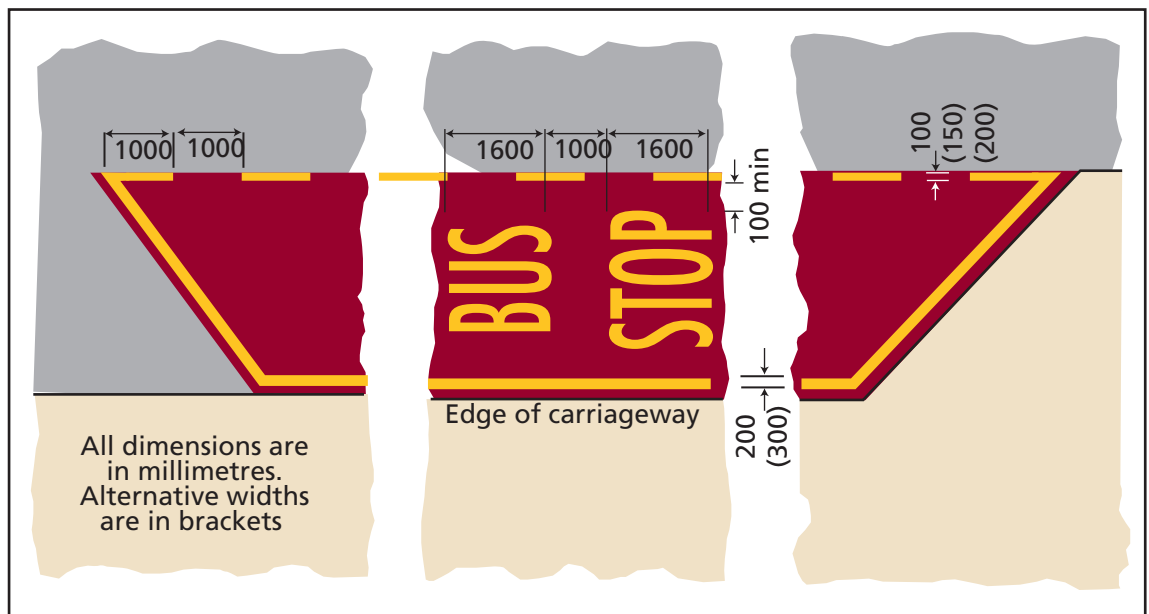


Diagram 8e – Marking for lay-by

- 8.11 It should be noted that the modified bus lay-by developed by London (See **Diagram 8j**) includes a modified form of their carriageway marking in which the broken line is offset by **0.5m** into the running lane. Use of this technique in N.I. will require authorisation or an amendment to the Traffic Sign Regulations.

- 8.12 Where parking infringement into the bus bay is continually found to be a problem, consideration should be given to moving the stop to an alternative location, which may overcome the problem. Where parking is found to obstruct the bus access into the bay a range of alternative treatments that economise on kerbspace are detailed in paragraph 8.24.

CARRIAGEWAY COLOURING

- 8.13 Consideration should be given to applying a contrasting surface colour within bus stop areas at selected stops where the level of parking infringement within the bus bay has proved to be a particular problem. The most suitable and readily available colour is red. Durability, colourfastness and skid resistance of selected materials must be ensured. The recommendation for Northern Ireland is that the full width of the bus bay, within the prescribed carriageway marking, is treated (**See Photo 8f**). As with the bus bay, enforcement is necessary to ensure that the coloured markings do not fall into disrepute.



Photo 8f – Typical NI carriageway markings

BUS LAY-BYS

- 8.14 Bus lay-bys can present inbuilt problems for buses in that:
- Many existing lay-bys are built to dimensions that do not allow buses to stop close to the kerbside and do not accommodate all modern bus types;
 - Bus drivers experience delays rejoining the traffic stream from the lay-by and can be reluctant to make proper use of them; and,
 - They are often used by motorists seeking a parking space, thereby frustrating proper use by buses.
- 8.15 For these reasons bus lay-bys are generally not recommended for typical urban streets with a **30mph** (or less) speed limit. Different considerations apply to trunk roads and rural areas where higher traffic speed makes it desirable to move the bus out of the main traffic stream in the interests of road safety. Bus lay-bys may also be justified at stops where buses may be stationary for longer than usual, such as terminal points for the bus service or for specific journeys e.g. routes accommodating schools.
- 8.16 Where problems have been experienced such as those described in point **8.13** or where other safety issues arise, consideration should be given to having the lay-by removed or remodelled to upgraded dimensions as funding becomes available.

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

8.17 Due to higher entry speeds, more clear space for lateral movement is required on the approach to a bus stop than on the departure side. These requirements apply equally whether the lateral movement of the bus is due to entering a bus bay or accessing a stop between parked cars. Typical entry tapers are in the order of **1 in 5**, and exit tapers in the order of **1 in 4**.

8.18 The standard dimensions for bus lay-bys are shown in **Diagram 8g**. Where kerbside length is constrained, an alternative layout is given in **Diagram 8h**. However, this layout requires substantially more verge/footway depth to provide and is only designed to accommodate buses up to a maximum length of **11m** whereas modern buses have a maximum permissible length of **12m**.

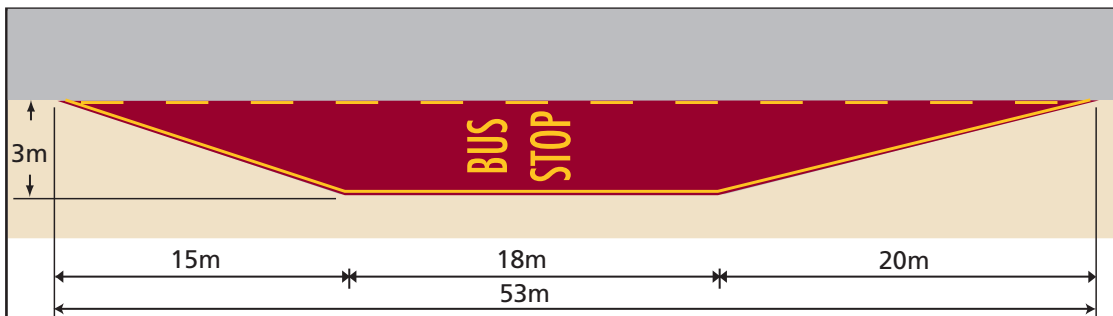


Diagram 8g – Standard layout of bus lay-by

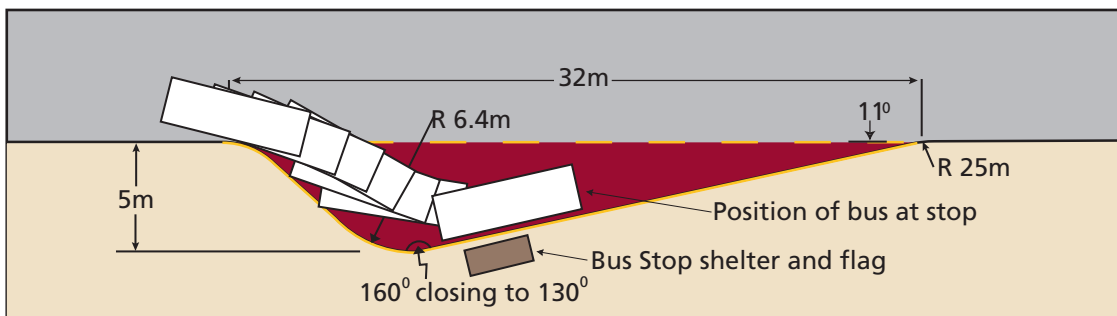


Diagram 8h– Saw tooth bus lay-by

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

8.19 **Diagram 8j** shows a modification to a standard bus bay which reduces the amount of footway/verge required by allowing the marked bay to encroach into the carriageway. This extension to the length of the parallel kerbface provides a beneficial increase in the stopping area and helps the driver to properly align the bus. Designers will need to consider the implications of a stopped bus encroaching into the inside lane of the carriageway.

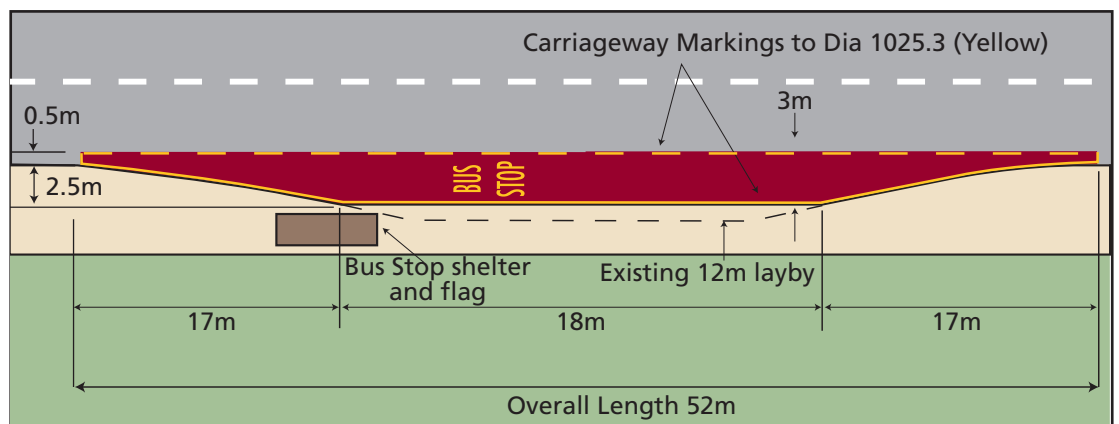


Diagram 8j – Modified layout



Photo 8k - Typical lay-by – Toome Bypass

8.20 Other low cost options such as half width lay-bys can be considered where site conditions demand. Dimensions can be found in the **London Publication**¹¹. These designs should also be considered as modifications where there are problems with bus access or egress at existing lay-bys and carriageway conditions allow for a half width lay-by.

8.21 **TA 69/96 – ‘The Location and Layout of Lay-bys’** from the **Design Manual for Roads and Bridges**¹², gives details for the provision of bus lay-bys on roads where traffic speeds are high. Figure 1a – Geometric Layout of Lay-bys (re-produced below as **Diagram 8I**) shows the required layout of a bus lay-by on a dual carriageway.

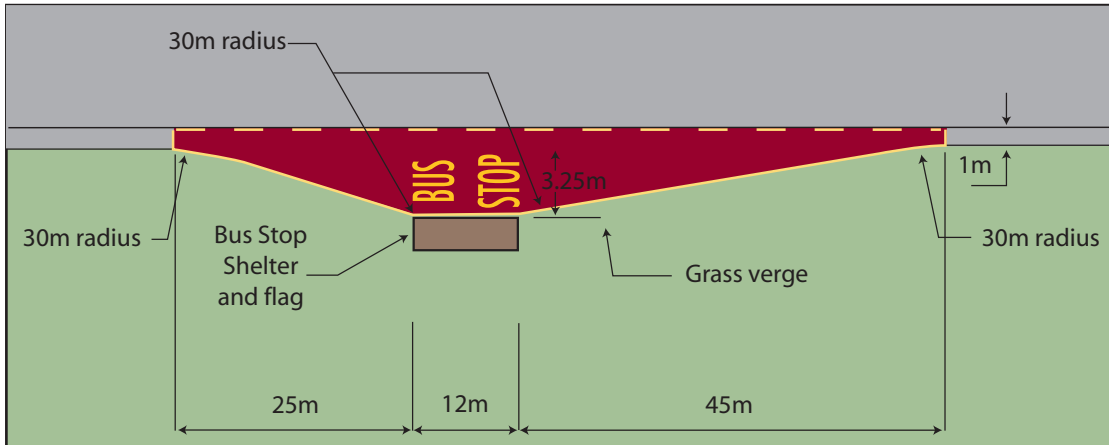


Diagram 8I – Typical bus stop layout dimensions for high-speed road

BUS BAYS

8.22 The permitted width of a bus bay is fixed at **3.0m**. The permitted length will vary according to the specific requirements found at the proposed bus stop site.

¹¹Guidelines for the design of bus bays and bus stops to accommodate the European standard bus, The London Bus Priority Network

¹²Design Manual for Roads and Bridges

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

8.23 The minimum permitted length of a bus bay should be **19m** (see **Diagram 8m**). However, this should only be used:

- Where no parking is allowed on either side of the road;
- On an all day bus lane;
- On local distributor roads in new developments where parking is unlikely; or,
- Where the stop is deemed to be low-usage.

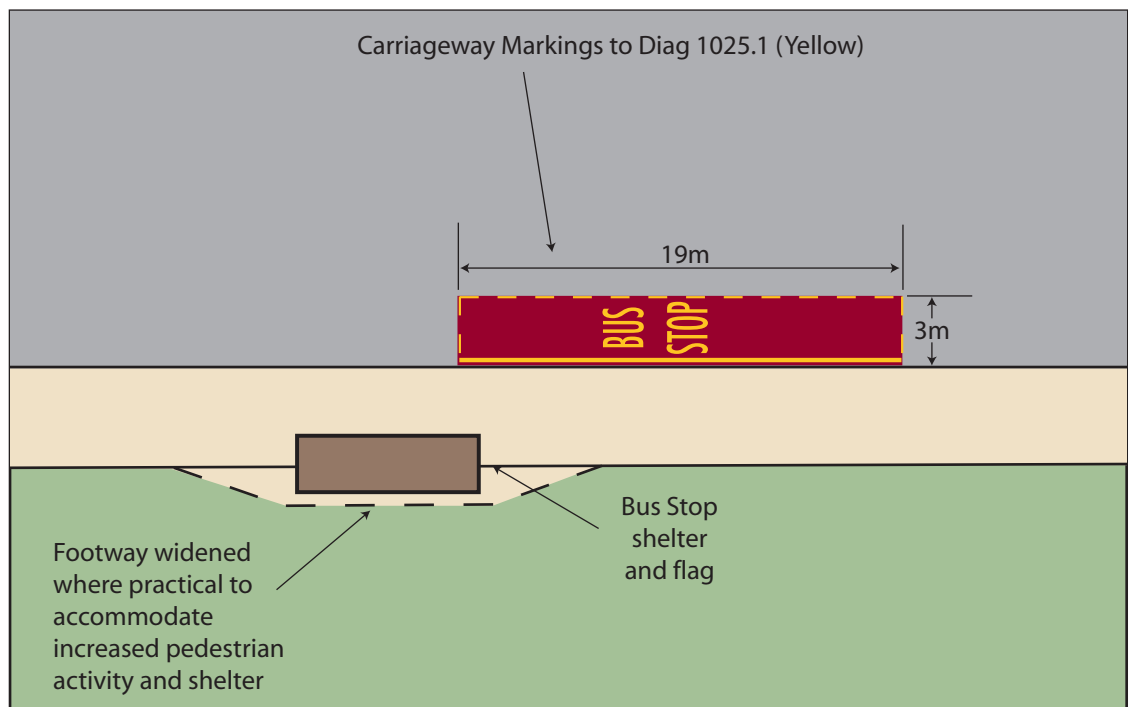


Diagram 8m – Low-usage kerbside bus stop

8.24 In a mid-block situation, that is away from junctions and traffic signals, and where parking is permitted, the minimum requirement for the length of a bus bay is **37m** which comprises of **13m** clearance for entry, **15m** for stopping and **9m** for exit (see **Diagram 8n**).

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

8.25 The length of kerb reservation required may be reduced by placing the bus stop close to a junction (See **Diagram 8o**), thereby using the width of the junction to keep the entry clear. Similarly, a bus stop immediately following a pedestrian crossing, will allow the 'zigzag' marking to keep the entry clear (See **Diagram 8p**).

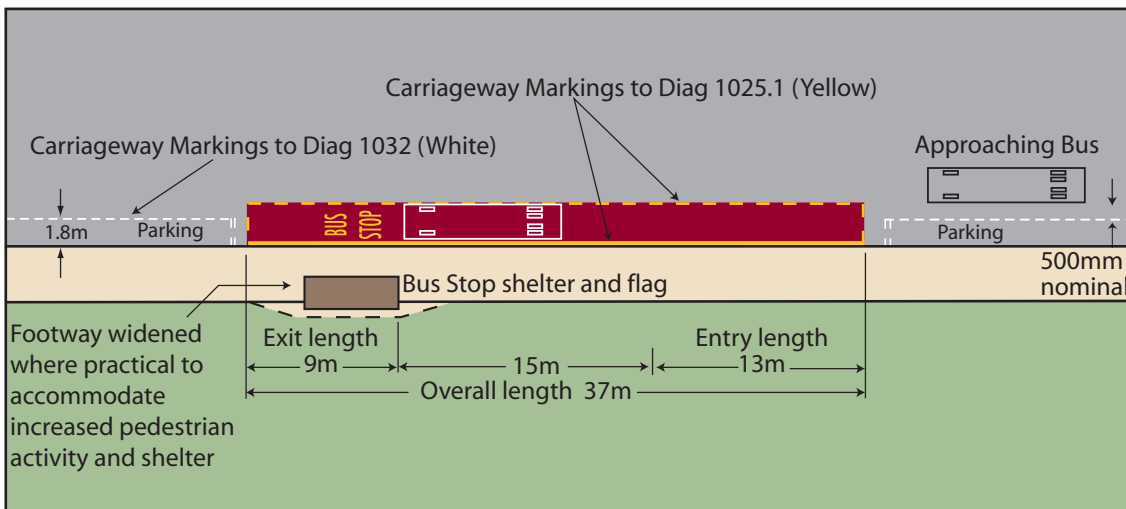


Diagram 8n – Standard mid-block kerbside bus stop

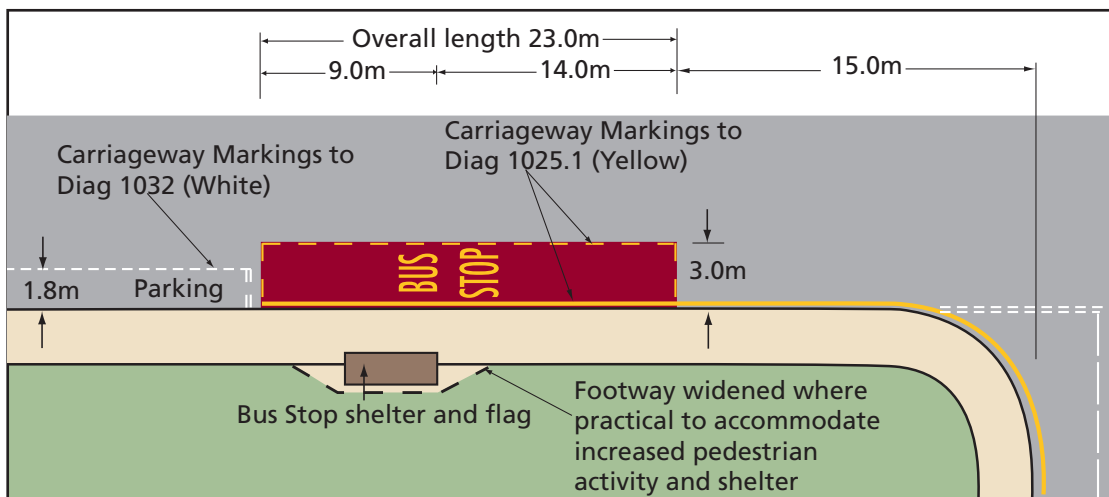


Diagram 8o– Kerbside stop on exit side of junction

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

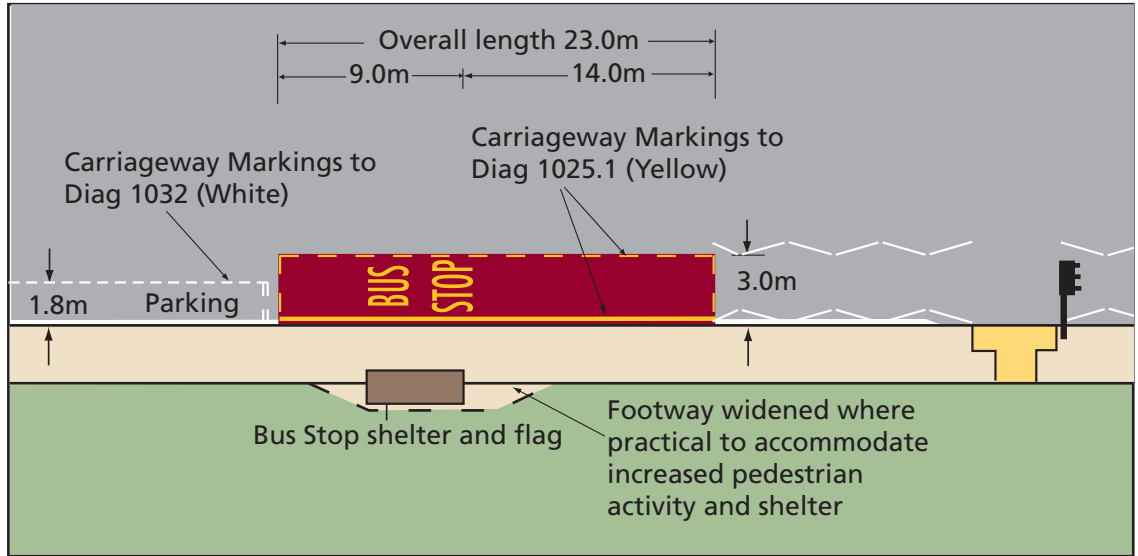


Diagram 8p– Kerbside stop on exit of pedestrian crossing

8.26 A combination arrangement will be appropriate where the bay is extended for use for other purposes e.g. as a parking bay or left turning lane (See **Diagram 8q**).

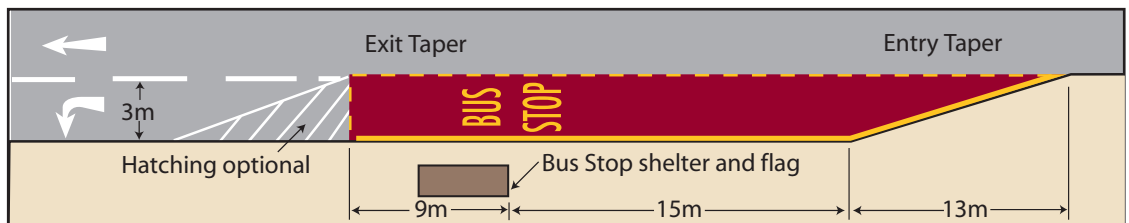


Diagram 8q – Combination bus bay

8.27 A variation of this concept will allow one bus stop to be located in a lay-by, while another can make effective use of the build out that exists. The stop in the lay-by may be used for urban-type services, for setting down and picking up, while the stop on the build-out might be reserved for express or longer distance services. In this way, minimum disruption is caused to traffic flow, (See **Diagram 8r**). This design may be particularly appropriate where the running lane is a peak hour bus lane.

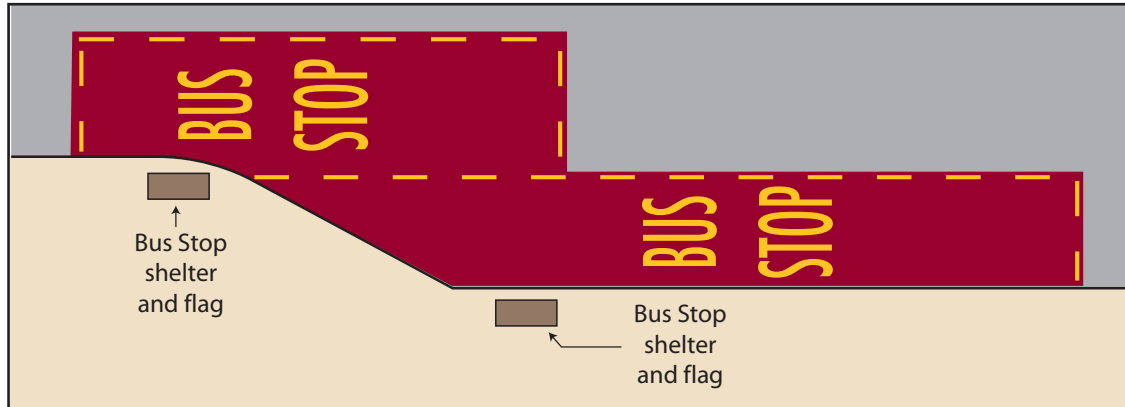


Diagram 8r – Extended markings

8.28 Where a bus stop is provided on a major road constructed with hard shoulders, bus bays should be laid on the hard shoulder, replicating in marking material the shape and dimensions of a bus stop lay-by. Added emphasis can be made by hatching the shoulder at the entry and exit tapers (See **Diagram 8s**).

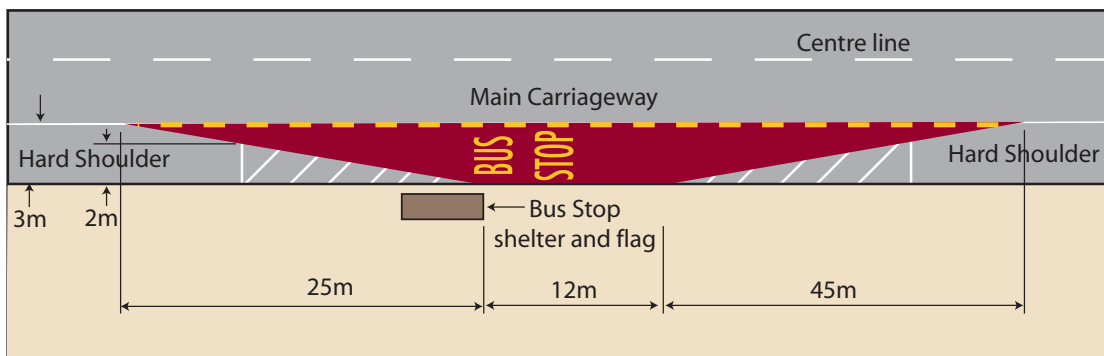


Diagram 8s - Bus bay on hard shoulder

8.29 Provision of a bus bay with the carriageway markings specified above makes it an offence for any other vehicle to stop within the marked area. It should be emphasised to enforcement agencies that this is for safety and convenience of passengers and no exceptions (e.g. for goods vehicles) are permitted.

8. CARRIAGEWAY INFRASTRUCTURE FOR BUS STOPS

8.30 Where two or more bus stops are provided in adjacent positions to allow segregation of boarding for buses on different services or routes the carriageway markings may be extended in length. Sufficient space must be allowed for the entry and exit of successive buses (See **Diagram 8t**). The kerbside line, if appropriate, should be extended between the stops and additional hatching may also be added to define the entry/exit length.

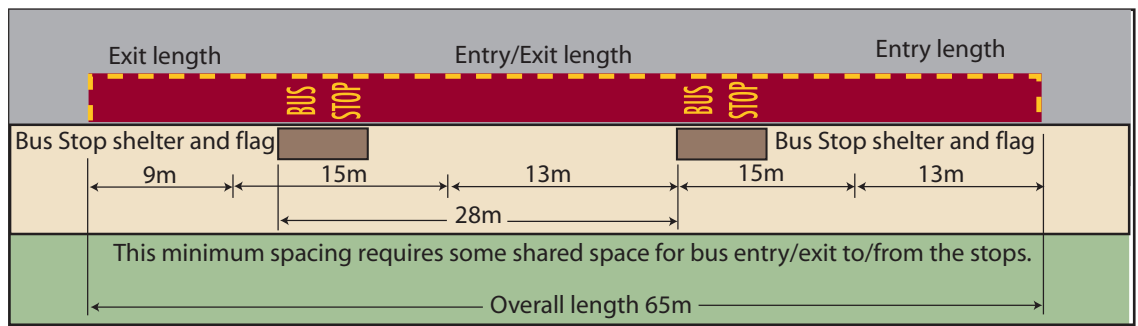


Diagram 8t – Extended markings for double bus stop

8.31 It may be that, subject to adequate enforcement, in the long term every bus stop should be protected by carriageway markings prohibiting stopping by other vehicles. In the short term, priority should be given to bus stops which are frequently obstructed, such as locations with commercial frontages, certain residential areas with restricted off street parking and locations around the circumference of parking control zones. It must be a consideration in locating such markings that enforcement is necessary, as experience has shown that a lack of enforcement can bring all such bus bays into disrepute.

BUS STOP WALKING DISTANCES

Maximum distance to stop (3.6) 400m*

Average walking distance from majority of dwellings (3,6) 200m*

Maximum distance for elderly and mobility impaired (3.6) 100m*

* = With gradients – reduce distances by 10m for every 1m rise or fall

BUS STOP SPACING

General spacing between stops (3.10) 250 – 300m

BUS STOP SEPARATION

Minimum separation between opposite stops (tail to tail distance) 36m
(3.17)

BUS STOP SIGNS

Minimum height to bottom of sign (4.5) 2.5m

Minimum sign width (4.5) 450mm

Minimum sign height (4.5) 620mm

Maximum sign height (4.5) 780mm

Minimum area of sign that requires TAS check (4.5) 0.3m²

DISPLAY PANELS

Distance above ground level (5.3) Between 0.9 and 1.8m

Maximum height above ground level (5.3) 1.9m (1.7m average)

SHELTERS

Minimum width of footway past shelter (6.9) 1.8m

Minimum clearance between shelter and kerb (6.9) 0.5m

Depth of tonally contrasting visibility band (6.10) 140 - 160mm

Height of contrasting band above ground level (6.10)	1.5m
Minimum dimensions for cantilever style shelter (6.17)	1.5 x 4.0m
Minimum dimensions for enclosed shelter (6.17)	2.0 x 4.0m
Height of 'perch' rail above ground level (6.24)	700mm
Height of seats above ground level (6.24)	450mm
Height of arm rests above seat level (6.24)	200mm

FOOTWAYS AND HARD STANDINGS

Standard kerb height (7.7)	125mm
Easy access kerb height (7.12)	160mm
Length of easy access kerbing at lightly used stops (7.14)	4m
Length of easy access kerbing at standard single stop (7.14)	8m
Length of easy access kerbing at double stop (7.14)	16m
Length of easy access kerbing at double stop used by articulated buses (7.14)	28m

BUS BOARDERS

Minimum length of boarder (7.24)	3 - 5m
Minimum length of boarder where footway width is limited (7.24)	10m
Desirable length of boarder where footway is limited (7.24)	12m
Width of full width boarder (7.25)	2m
Width of half width boarder (7.25)	1m
Height of reflectorised bollards (7.26)	1m

Note - The figures in brackets refer to the relevant paragraph numbers

BUS LAY-BYS

Entry taper to lay-by (8.17)	1 in 5
Exit taper from lay-by (8.17)	1 in 4
Overall length of standard bus lay-by (8.18)	53m
Length of entry taper to standard bus lay-by (8.18)	20m
Length of exit taper from standard bus lay-by (8.18)	15m

BUS BAYS

Permitted width (8.22)	3m
Minimum permitted length (8.23)	19m
Length of standard 'mid-block' bus bay (8.24)	37m
Length of bus bay on exit side of junction (8.25)	23m
Minimum distance between bus bay and junction (8.25)	15m
Length of bus bay on exit side of pedestrian crossing (8.25)	23m
Length of bus bay for double bus stop (8.30)	65m



**A DOCUMENT OF PLANNING PRINCIPLES WITH REGARD TO THE
ERECTION OF NEW AND REPLACEMENT BUS SHELTERS**



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THE PLANNING SERVICE (DOE) IN ASSOCIATION WITH ROADS SERVICE (DRD)

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Erection of New and Replacement Bus Shelters:

Planning Principles

1.0 INTRODUCTION

- 1.1 The Department recognises the valuable contribution bus shelters can make to the comfort of people who travel by public transport. This issue has become more current as the Department for Regional Development (DRD) rolls out a programme of Quality Bus Corridors for the Greater Belfast Area.
- 1.2 While the benefits of passenger comfort and sustainable transport are recognised, it is acknowledged that in certain locations bus shelters can detract from the quality of the townscape or the appearance of quality buildings, particularly in conservation areas.
- 1.3 In addition, they can also become places where people congregate and may lead to a loss of residential amenity
- 1.4 This note sets out the policies and considerations that will be taken into consideration in the submission and determination of applications for bus shelters.
- 1.5 The general approach adopted will be that bus shelters, with or without associated advertising, will not normally be proposed by DRD or their agents unless it is considered that they will serve a beneficial purpose to the public at large.

2.0 GUIDANCE

2.1 Amenity

- 2.2 Due to the potential for disturbance and loss of residential amenity, applications for shelters, which are located in close proximity to residential properties, will be considered in relation to the impact on those properties. As far as possible within technical constraints, the positioning of new shelters will take account of the boundary treatment at adjoining premises to reduce the potential impact.
- 2.3 Shelters will not normally be acceptable when positioned either outside listed buildings or in situations where they would seriously detract from the setting of such a building.
- 2.4 Within Conservation Areas, shelters incorporating advertising will normally be seen as an undesirable form of development and will not therefore usually be acceptable. The exception to this will be within the City Centre where there is already a certain level of street furniture and where there is a need to facilitate the public. Within the City Centre Conservation Area, however, the Department will require bus shelters to be of high quality in design and finishes.

2.5 Traffic Safety

- 2.6 In those situations where a shelter is associated with the provision of a new bus stop, a consideration will be the location of the bus stop in relation to the proximity of the junctions, disruption of traffic flows and pedestrian flows.
- 2.7 Where a shelter is associated with an existing bus stop, planning permission normally be granted provided normal technical and environmental considerations can be met. This will include:
- The shelter should not restrict visibility from road junctions or private accesses.
 - Rainwater from the shelter should not discharge onto private property.
 - No part of the shelter should normally be less than 0.5 metres from the edge of the carriageway unless otherwise unavoidable to meet built heritage considerations.
- 2.8 Where an advertising panel is associated with a shelter consent to display the advertisement will not normally be granted in situations where it is judged that it would result in distraction to motorists at a junction, roundabout, or pelican crossing.
- 2.9 Illuminated advertising panels will not normally be permitted in situations where they would cause confusion to drivers or distract their attention from road signs or traffic signs.

A Document of Planning Principles With Regard to the Erection of New and Replacement Bus Shelters.

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5 Public Service Vehicles Accessibility Regulations (NI) 2003, HMSO, 30 April 2003.

6 Creating Places – Achieving Quality in Residential Developments, DOE Planning Service and DRD Roads Service, May 2000.

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7 Worboys' Committee Report (1963).

- 8 Inclusive Mobility, A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure, Department for Transport, September 2002.
- 9 A Document of Planning Principles With Regard to the Erection of New and Replacement Bus Shelters, DOE Planning Service in Association with DRD Roads Service, December 2001.
- 10 Traffic Signs Regulations (Northern Ireland), 1997.
- 11 Guidelines for the design of bus bays and bus stops to accommodate the European standard bus, The London Bus Priority Network.
- 12 Design Manual for Roads and Bridges.

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