

Pedestrian Access to Public Transport Appendix 23

February 2023



Report on defining standards for the access to, and infrastructure related with, public transport.

Written By: David Mott

Date: Wednesday, 28 June 2023

Revision: 2.8

Contents

IIIU	ouuc	.LIUII	
Rev	iew (of Existing Standards and Related Information	. 5
3.1.	Free	quency	. 5
.2.	Dist	ance/Time to Bus Stop	. 6
.3.	Wal	kway Dimensions	. 7
3.3.	2.	Height	. 8
.4.	Sign	nage	. 8
.5.	Surf	face Quality	. 8
.6.	Safe	ety	. 9
3.6.	1.	Traffic	. 9
3.6.	2.	Crossings	. 9
3.6.	3.	Feeling and Attractiveness	10
Pro	d Standards	11	
liogra	aphy		12
nexe	1: Su	ummary of Standards and Relevant Information	13
	Pub Rev 3.1. 3.2. 3.3. 3.3. 3.3. 3.6. 3.6. 3.6. Propliogra	Public T Review 6 3.1. Free 3.2. Dist 3.3. Wal 3.3.1. 3.3.2. 3.4. Sign 3.6. Safe 3.6.1. 3.6.2. 3.6.3. Propose liography	3.1. Frequency 3.2. Distance/Time to Bus Stop 3.3. Walkway Dimensions 3.3.1. Width 3.3.2. Height 3.4. Signage 3.5. Surface Quality 3.6. Safety

This document is protected by Copyright. The design of any article recorded in this document is protected by design right and the information contained in the document is confidential. The document may not be copied. Any design may not be reproduced and the information contained in the document may not be used or disclosed except with the prior written permission of and in the manner permitted by the author, David Mott © 2020

1. Introduction

The Transport Topic Group is part of the team that has been set up to produce the Chippenham Neighbourhood Plan. One of the policy topics being considered by some of the members of the topic group is:

"Pedestrian Access to public transport".

As part of the preliminary investigations associated with this policy topic it is useful to define suitable standards for the access to, and infrastructure related with, public transport. This report summarises the relevant standards and policies in order to achieve a set of standards that can be used to review the existing provisions for access, and to define requirements for future developments.

This report consists of the following sections:

- "1: Introduction" (this section) which describes the scope, purpose, and contents of this document.
- "2: Public Transport" which explains what this document means by "public transport".
- "3: Review of Existing Standards and Related Information" which is the major section of the document. It details the existing standards and information that we have discovered that are relevant to the topic.
- "4. Proposed Standards" Summarises the standards that we propose should apply to pedestrian access to public transport.

These sections are followed by:

- Bibliography: That lists the sources used.
- Annexe 1: Summary of Standards and Relevant Information: that is a copy of the spreadsheet used to extract information from the sources.

2. Public Transport

The Wiltshire Local Transport Plan 2011-2026: Public Transport Strategy (Wiltshire Council, 2011) considers various forms of public transport services. These are:

- Bus services.
- Demand responsive transport.
- Community and voluntary transport.
- Rail.
- Taxis and private hire vehicles.
- Education, social care and health transport

When considering "pedestrian access to public transport" we may reasonably assume that some of these forms of public transport provide a "door-to-door" service and so do not require any specific pedestrian access. The two major exclusions to this are bus and rail services, which are both considered in this document.

3. Review of Existing Standards and Related Information

We have reviewed a wide range of existing standards and related information. The relevant information from these sources was extracted and summarised. The list of sources we consulted is given in the Bibliography. The summary of the existing standards and related information is shown in Annexe 1: Summary of Standards and Relevant Information. The individual subjects of interest are discussed in the following sub-sections.

3.1. Frequency

Relevant definitions and standards are given in:

- Towards harmonised indicators on access to urban public transport (Poelman, 2016) defines frequencies: "High = >10 per hour; Medium = 4-10 per hour; and Low = < 4 per hour".
- Wiltshire Local Transport Plan 2011-2026: Public Transport Strategy (Wiltshire Council, 2011) defines frequencies: "Proposed hierarchy of bus services:
 - Strategic Network Services:
 - Primary Strategic Network: Hourly service.
 - Secondary Strategic Network: Two hourly service.
 - Local Services towns:
 - Primary Town Services: Hourly Service.
 - Secondary Town Services: 5 return trips per day.
 - Local Services rural areas:
 - Services linking Local Service Centres: Three return journey opportunities per day, including for journey to work.
 - Services to other settlements: One return per day

Conclusion

The frequencies quoted in the EU paper (Poelman, 2016) are quite high for our purposes. They are probably more applicable for city services. For the purposes of the Chippenham Neighbourhood Plan we have decided to adopt a definition of frequency based on the Wiltshire Council definition but extended to reflect aspirations for a better service. Our definitions for access within the town are therefore:

Good: Two or more per hour.

• Average: Hourly Service.

• Poor: 5 return trips per day

Not Acceptable: Less than 5 return trips per day

3.2. Distance/Time to Bus Stop

Relevant definitions and standards are given in:

- CIHT: Buses in Urban Developments (Pharoah, 2018) states:
 - A 300-metre notional catchment will result in maximum walking distances up to around 400 metres.
 - Distances between bus stops will generally be in the range of 200-400 metres.
 - Stagecoach (2017) recommends a spacing of 280-320 metres in residential areas
 - Core bus corridors with two or more high-frequency services: max walking distance 500 metres
 - Single high-frequency routes (every 12 minutes or better): max walking distance 400 metres
 - Less frequent routes: max walking distance 300 metres
 - Town/city centres 250 metres
- Towards harmonised indicators on access to urban public transport (Poelman, 2016) recommends:
 - o a maximum walking time of 5 minutes to a bus stop. (This is roughly equivalent to 400 metres.)
 - o distance limit without a rest: Wheelchair users 150m; Visually impaired 150m; Mobility impaired using stick 50m; Mobility impaired without walking aid 100m.
- Wiltshire Local Transport Plan 2011-2026: Public Transport Strategy (Wiltshire Council, 2011) recommends "Primary Town Services: urban population within 400m ...".
- Chippenham Transport Strategy DRAFT Strategy Refresh 2015 (Atkins Ltd, 2015) notes that "some parts of the ... site are more than 400 metres from existing stops ... etc.", which infers that this report adopted the "400m standard".
- Planning Portal: Promoting Public Access (UK Government, 2006) confirms that "Ideally, walking distances to bus stops should be shorter than that to the competing car park, and no more than 400 metres. Walking distances need to be much shorter for people with mobility impairments (e.g. sheltered housing)"

Conclusion

The generally accepted maximum distance to a bus stop in the Chippenham environment is 400m. It is noted that this should be "much less" (about 150m) for people with mobility impairments (e.g. in areas of sheltered housing) - although an alternative is to provide a bench suitable for a rest. For assessment purposes it is acceptable to use a 300m notional catchment from a bus route.

3.3. Walkway Dimensions

3.3.1. Width

Relevant definitions and standards are given in:

- Design standards for width of footways were 1.8m in Highways Act, 1959, and 2.0m in Highways Act, 1980.
- Sustrans' Manifesto for UK Government (Sustrans, 2019) says "Pavements should be wide enough to accommodate double pushchairs and wheelchairs".
- Sustrans' "Paths for Everyone" review (Sustrans, 2018) confirms that paths should be "Wide enough to comfortably accommodate all users".
- CIHT: Buses in Urban Developments (Pharoah, 2018) states "The minimum footway width on bus routes recommended by CIHT is 2.5 metres".
- Making transport accessible for passengers and pedestrians (Department for Transport, 2005) recommends:
 - Someone who does not use a walking aid can manage to walk along a passage way less than 700mm wide, but just using a walking stick requires greater width than this; a minimum of 750mm. A person who uses two sticks or crutches, or a walking frame needs a minimum of 900mm, a blind person using a long cane or with an assistance dog needs 1100mm. A visually impaired person who is being guided needs a width of 1200mm. A wheelchair user and an ambulant person side-by-side need 1500mm width.
 - A clear width of 2000mm allows two wheelchairs to pass one another comfortably. This should be regarded as the minimum under normal circumstances. Where this is not possible because of physical constraints 1500mm could be regarded as the minimum acceptable under most circumstances

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that a pathway width of 2.5 metres is desirable, but this may be reduced to 2m if considered necessary. Pathways of such widths should display "No Cycling" signs.

3.3.2. Height

Relevant definitions and standards are given in *Making transport accessible for passengers* and pedestrians (Department for Transport, 2005), which recommends that "Unobstructed height above a pedestrian way is also important, especially for visually impaired people. Generally, this should be a minimum of 2300mm "

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that a pathway needs an unobstructed height of 2.3m.

3.4. Signage

Relevant definitions and standards are given in:

- Sustrans' "Paths for Everyone" review (Sustrans, 2018), which proposes that paths should be "Signed clearly and consistently"
- CIHT: Buses in Urban Developments (Pharoah, 2018), which states that "Amongst the quality considerations are Legibility, if necessary with pedestrian-specific signing to the nearest bus stop".

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that appropriate legible signs showing the way to the bus stops and local items of interest could usefully be provided.

3.5. Surface Quality

Relevant definitions and standards are given in:

- Sustrans' "Paths for Everyone" review (Sustrans, 2018), which proposes that paths should be "Smooth, well maintained, and well drained"
- CIHT: Buses in Urban Developments (Pharoah, 2018), which states that "Amongst the quality considerations are step-free access throughout (including dropped kerbs or raised carriageways at junctions and pedestrian crossing places); Absence of obstructions (parked cars, bins, advertising 'A' boards, bollards, etc.); ...".

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that paths should be smooth, well drained, well maintained, step-free and unobstructed.

3.6. Safety

3.6.1. Traffic

Relevant definitions and standards are given in:

- Sustrans' "Paths for Everyone" review (Sustrans, 2018), which says "We want to create a safe and accessible traffic free Network".
- CIHT: Buses in Urban Developments (Pharoah, 2018), which states that "Amongst the quality considerations are little exposure to vehicle traffic (volume, speed, composition, noise and air pollution); Safety and security, including oversight and good lighting".

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that paths should, where possible, avoid busy roads.

(note: By some definition a "footway" adjoins a public highway; on divergence the "footway" becomes defined as a "footpath").

3.6.2. Crossings

Relevant definitions and standards are given in:

- Sustrans' "Paths for Everyone" review (Sustrans, 2018), which says "... busy roads can be crossed safely by all users."
- CIHT: Buses in Urban Developments (Pharoah, 2018), which states that "Amongst the quality considerations are safe road crossing".

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that appropriate safe crossings must be provided so that roads can be crossed safely by all users.

3.6.3. Feeling and Attractiveness

Relevant definitions and standards are given in:

- Sustrans' "Paths for Everyone" review (Sustrans, 2018), which says:
 - o paths "could be used by a sensible 12-year-old travelling alone.
 - o A path "... feels a safe place to be."
 - o "... all users can access and travel along path".
- CIHT: Buses in Urban Developments (Pharoah, 2018), which states:
 - "walking routes to and from bus stops should be designed for use by people of all abilities."
 - "Amongst the quality considerations are light and shade, microclimate, shelter from wind and rain; visual interest from buildings and landscaping (e.g., trees, grassed areas)
 - "The addition of planted verges or swales can improve the pedestrian ...
 experience.

Conclusion

For the purposes of the Chippenham Neighbourhood Plan we have decided that pathways should be pleasant and simple to use.

4. Proposed Standards

We propose the following standards should be applied to all new developments. Where appropriate they should also be applied to existing areas.

(a) Service Levels are defined as:

Good: Two or more buses per hour.

Average: Hourly Service.

• Poor: 5 return trips per day

• Not Acceptable: Less than 5 return trips per day

- (b) The maximum distance to a bus stop should be 400m. Where regular usage by people with mobility impairments may be anticipated this should be reduced to 150m. (Note that for assessment purposes it is acceptable to use a 300m notional catchment distance from a bus route.)
- (c) The minimum width of a footway on a bus route and all footpaths (not adjacent to roads) is 2.5m, footways reducing to 2.0m elsewhere. "No Cycling" signs should be provided for all minimum width pedestrian paths. There should be an unobstructed height of 2.3m.
- (d) Appropriate legible signs showing the way to the bus stops and local items of interest should be provided.
- (e) Paths must be smooth, well drained, well maintained, step-free and unobstructed.
- (f) Paths should, where possible, avoid busy roads.
- (g) Appropriate safe crossings must be provided so that all roads can be crossed safely by all users.
- (h) Paths should be pleasant and simple to use.

Bibliography

- Atkins Ltd. (2015, November 5). Chippenham Transport Strategy DRAFT Strategy Refresh 2015. Atkins Ltd.
- Department for Transport. (2005, December 15). Making transport accessable for passengers and pedestrians. Retrieved from UK Government: https://www.gov.uk/government/publications/inclusive-mobility
- Pharoah, T. (2018, January). Buses in Urban Environments. London: The Chartered Institution of Highways & Transportation.
- Poelman, H. (2016, November). *UDN Brussels 2016*. Retrieved from European Commission. DG Regional and Urban Policy.:
 https://ec.europa.eu/regional_policy/sources/conferences/udn_brussels_2016/7.1%20 Hugo%20Poelman%20Regio.pdf
- Sustrans. (2018, November). *Paths for Everyone*. Retrieved from Sustrans: https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_20 18.pdf
- Sustrans. (2019). Sustrans Manifesto for UK Government. Retrieved from Sustrans: https://www.sustrans.org.uk/media/5211/sustransmanifestoukgovernment.pdf
- UK Government. (2006, November 09). *Transport Assessment Stage 2*. Retrieved from Planning Portal:

 https://www.planningni.gov.uk/de/index/policy/planning_statements_and_suppleme ntary_planning_guidance/spg_other/transport/transport_preparing/transport_stage2/transport_public.htm
- Wiltshire Council. (2011, March). Wiltshire Local Transport Plan 2011-2016: Strategy.

Annexe 1: Summary of Standards and Relevant Information

Source	Frequency	Distance/Time	Dimensions		Signage	Surface Quality	- "	Safety		Attractiveness
Sustrans' Manifesto for UK Government			Width	Height			Traffic	Crossings	Feeling	
Government			Pavements should be wide enough to accommodate double pushchairs and wheelchairs							
Sustrans' "Paths for Everyone" review			pus chairs and wheelchairs. Wide enough to comfortably accommodate all users.		Signed clearly and consistently	Smooth, well maintained, and well drained	We want to create a safe and accessible traffic free Network.	busy roads can be crossed safely by all users.	could be used by a sensible 12 year old travel ling alone. feels a safe place to be.	all users can access and travel along path.
		Note: A 300-metre notional catchment will result in maximum walking distances up to around 400 metres. Distances between bus stops will senerally be in the range of	The minimum footway width on bus routes recommended by CIHT is 2.5 metres.		Amongst the quality considerations are Legibility, if necessary with pedestrian- specific signing to the nearest bus	Amongst the quality considerations are step-free access throughout (including dropped kerbs or raised carriageways at junctions and pedestrian crossing places); Absence of obstructions (parked	Amongst the quality considerations are little exposure to vehicle traffic (volume, speed, composition, noise and air pollution); Safety and security,	Amongst the quality considerat ions are safe road crossing	walking routes to and from bus stops should be designed for use by people of all abilities. Amongst the quality	The addition of planted verges or swales can improve the pedestrian and driver experience.
CIHT: Buses in Urban Developments		will generally be in the range of 200–400 metres. Stagecoach (2017) recommends a spacing of 280–320 metres in residential areas Core bus corridors with two or more high-frequency services:			stop	cars, bins, advertising 'A' boards, bollards, etc.]; * light and shade, microclimate, shelter from wind and rain; * Visual interest from buildings and landscaping (e.g., trees, grassed areas)	including oversight and good lighting		considerations are light and shade, microclimate, shelter from wind and rain; visual interest from buildings and landscaping (e.g., trees, grassed areas); and	
		max walking dist 500 metres Single high-frequency routes (every 12 minutes or better): max walking dist 400 metres Less frequent routes: max walking dist 300 metres Town/city centres 250 metres							people-generating activities along the route (shops, schools, parks, etc.).	
Towards harmonised	High = >10 per hour									
indicators on access to urban public transport	Medium = 4-10 per	Maximum 5 minutes walk to bus or tram stop								
	hour Low = < 4 per hour									
		Recommended distance limit without a rest Wheelchair users 150m Visually impaired 150m Mobility impaired using stick 50m Mobility impaired without walking aid 100m	Someone who does not use a walking aid can manage to walk along a passage way less than 700mm wide, but just using a walking stick requires greater width than this; a minimum of 730mm. A person who uses two sticks or crutches, or a walking frame needs a minimum of 900mm, a blind person using a long cane or with an assistance dog needs 1100mm. A visually impaired	Unobstructed height above a pedestrian way is also important, especially for visually impaired people. Generally, this should be a minimum of 2300mm						
Making transport accessible for passengers and pedestrians			person who is being guided needs a width of 1200mm. A wheelchair user and an ambulant person side-by-side need 1500mm width. A clear width of 2000mm							
			allows two wheelchairs to pass one another comfortably. This should be regarded as the minimum under normal circumstances. Where this is not possible because of physical constraints 1500mm could be regarded as the minimum acceptable under most circumstances							
	bus services: Strategic Network Services: Primary Strategic Network: Hourly service	Proposed hierarchy of bus services: Local Services - towns: Primary Town Services: urban population within 400m of an hourly service								
	Secondary Strategic Network: Two hourly service									
Wiltshire Local Transport Plan 2011-2026: Public Transport	Local Services - towns: Secondary Town Services: 5 return trips per day									
Strategy	Local Services - rural areas: Services linking Local Service Centres: Three return journey opportunities per day, including for journey to work.									
Chinanahan Tananah	Local Services - rural areas: Services to other settlements: One return journey opportunity per day									
Chippenham Transport Strategy DRAFT Strategy Refresh 2015		South West Chippenham (CHI): Some parts of the strategic site are more than 400 metres from existing stops along the 84258 corridor. Access to any of the town's secondary schools is a particular issue for this site; Rawlings Green (CH2): Low existing service frequency and many areas of the site are more than 400 metres from an existing stop (up to 800 metres distance); and fast Chippenham (CH3): Some parts of the strategic site are considerably more than 400 metres from the London Road Corridor.								
Planning Portal: Promoting Public Access		Ideally, walking distances to bus stops should be shorter than that to the competing car park, and no more than 400 metres. Walking distances need to be much shorter for people with mobility impairments (e.g. sheltered housing)								