Guideline

Wayfinding and signage for people walking

December 2020

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1   Purpose of the Guideline

The Queensland *Wayfinding and signage for people walking* Guideline (the Guideline) helps develop and implement localised pedestrian wayfinding. It has been developed specifically for the Queensland context, and to complement existing local and national guidance. It supports the *Queensland Walking Strategy* aim to make walking an 'easy choice for everyone, everyday'.

Pedestrian wayfinding can improve people's experience of walking and can help people feel more confident and comfortable with walking as part of their everyday routines. Other benefits of pedestrian wayfinding include:

- encouraging more people to walk more often

- helping people to feel more connected to the area that they are in

- encouraging people to explore an area or walk to a new destination

- encouraging people to walk to a destination, rather than use a private vehicle

- increasing opportunities for retail or tourism spending and supporting growth in the local economy

- improving safety for walkers, and

- improving perceptions of safety for walkers through increased use and passive surveillance.

1.1   Who should use the Guideline?

Practitioners from state agencies, local government, consultants and other providers of traffic management and road design expertise (the 'user') are intended users of the Guideline.

The Guideline is not intended to replace existing local government guidance or guidance related to Priority Development Areas but, rather, assist where there is no guidance available.

There are specific aspects of implementing pedestrian wayfinding that, while addressed in the Guideline, may benefit from additional specialist input; for example, consulting with a registered landscape architect or urban design professional so good place-related design outcomes are achieved. Consultation with a sign designer may also be necessary to agree construction materials and develop construction-ready drawings.

1.2   Structure of the Guideline

The structure of the Guideline is as follows:

- outline of related documents on wayfinding signage and non-wayfinding signage and where and when these should be used

- discussion of why wayfinding signage for walkers is needed and the guiding principles for pedestrian wayfinding

- description of the design elements that should be incorporated into a wayfinding signage family, including a step-by-step guide on how to deliver wayfinding signage

- information on the maintenance of physical signage assets and information content, and

- guidance on the use of non-wayfinding interpretative signage and non-wayfinding pavement markings.

The Guideline does not include construction drawings, manufacturing guidance or technical specifications.

A final comment on terminology: in the Guideline, pedestrian signage is classified into two areas:

- wayfinding signage: signage and pavement markings with the key function of providing information to support navigation, and

- non-wayfinding signage: signage and pavement markings which provide regulatory information, hazard, warning or historical and cultural information.

The terms 'walkers' and 'people who walk' are also used in place of 'pedestrian', except in relation to legislative or regulatory requirements. While these terms refer to walking, it should be noted that people using wheelchairs and personal mobility devices (mobility scooters) are included in this Guideline and the material it covers relating to wayfinding.

1.3 Terms and definitions

Table 1.3 details terms used in this Guideline and their definitions.

Table 1.3 – Terms and definitions

Term	Definition
Confirmation point	A location where walkers may hesitate and require reassurance that they are still going in the right direction, or where they require confirmation that they have arrived at their destination
Content schedule	A document confirming the information to be shown on each sign
Decision point	A location where a walker must make a decision on the way to go
Focal point	Key origins and destinations that walkers travel from and to, or key landmarks acting as distinctive places in the environment which walkers may use to aid orientation
Non-wayfinding signage	Signage and pavement markings which provide regulatory information, hazard, warning or historical and cultural information
Pavement markings	Markings installed on the road that provide regulatory, warning or directional information
Place hierarchy	Using a hierarchy of place (for example, suburb, neighbourhood, place) to help walkers understand where they are now and the relationship of their current location to other locations in the vicinity, which helps build their mental map of an area
Progressive disclosure	Only giving people the level of information that they need at each step of their journey to reach their destination, gradually revealing more detail to walkers as they continue along their journeys
Recreational route	A path or route which walkers may use for recreational purposes which may be shared with cyclists
Signage placement plan	A plan showing where each sign will be installed in the street environment
Striders	People walking who tend to be familiar with the area and have less need for signage, who generally place a higher value on efficiency (for instance, completing their journey in less time)
Strollers	People walking who tend to explore their environments and require more information on what is nearby to aid their exploration

Term	Definition
Wayfinding signage	Signage and pavement markings with the key function of providing information to support navigation

2   Related documents and when to use them

This section gives an overview of related documents currently available for use in Queensland on pedestrian wayfinding and non-wayfinding signage. It documents this guidance and explains when and where it should be used. Further detail of documents referenced in this Guideline is provided in the Transport and Main Roads *Active transport users guidelines references*.

2.1   Wayfinding signage for walkers

There is some existing guidance on wayfinding signage in Queensland. This includes guidance produced by local governments such as Brisbane City Council, City of Gold Coast, City of Ipswich, Moreton Bay Regional Council, Sunshine Coast Regional Council, Rockhampton Regional Council, Toowoomba Regional Council, and City of Townsville.

This existing guidance also includes information on wayfinding in specific contexts. The context-specific guidance documents available for use across Queensland are shown in Figure 2.1 and Table 2.1.

Figure 2.1 – Map showing where existing context-specific wayfinding guidance should be applied
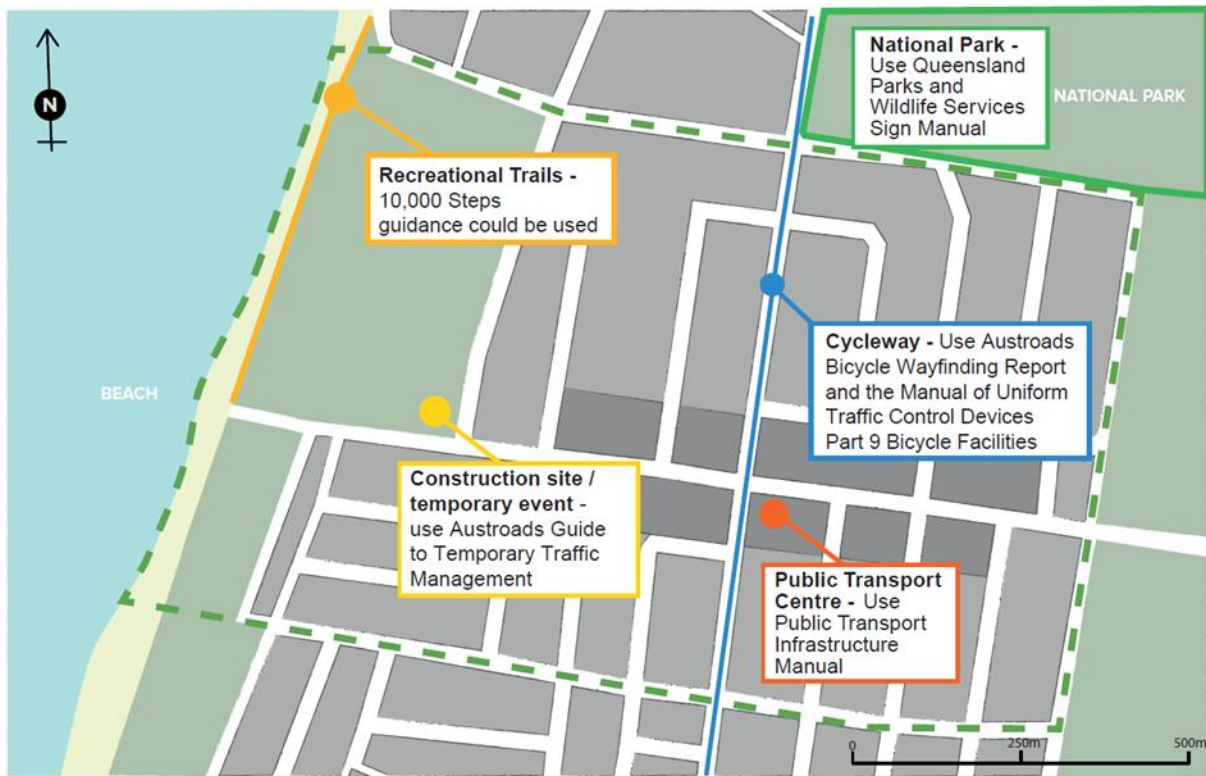
Table 2.1 – Existing wayfinding guidance available for use across Queensland, applicable to walkers

Document	Context applied to	When should this be used?
10,000 Steps Walkway Signage Design Guidelines	Statewide guidance for recreational routes included in the 10,000 Steps program	To brand and provide wayfinding along featured 10,000 Steps recreational routes
Austroads Research Report – *Bicycle Wayfinding*	Australia-wide guidance for bicycle wayfinding	To provide wayfinding along cycle routes including shared paths.
Bus Network Infrastructure Signage Manual *Rail Network Infrastructure Signage Manual*	Statewide guidance for bus and rail stations	To provide wayfinding internal to public transport stations
Queensland Parks and Wildlife Services (QPWS) Sign Manual	Statewide guidance for tracks and trails in National Parks	To provide wayfinding in National Parks
Australian Standard AS 1428 *Design for Access and Mobility* • Part 1 *General requirements for access – New building work* • Part 2 *Enhanced and additional requirements – Buildings and facilities* • Part 5 *Communication for people who are deaf or hearing impaired*	Australia-wide guidance for providing access to / within buildings for people with mobility and vision impairments	For guidance on wayfinding signs that can be read by people with mobility and vision impairments
Cooperative Research Centre for Rail Innovation: *Wayfinding in the rail environment*	Australia-wide guidance for rail stations	To provide guidance on incorporating the needs of people with disabilities in rail station environments (this is supplementary to AS 1428)
Cooperative Research Centre for Construction Innovation: *Wayfinding design guidelines*	Australia-wide guidance for pedestrian signs	To provide additional guidance on how to incorporate the needs of people with disabilities into the placement and design of signs (this is supplementary to AS 1428)
QDesign Manual	Statewide guidance for pedestrian signs	To provide guidance on incorporating the local history, heritage and characteristics of an area into the design of signs.

2.2   Non-wayfinding signage for walkers

The existing guidance on non-wayfinding signage is comprehensive, as shown in Table 2.2, and should be used when applicable.

Transport and Main Roads' Queensland *Manual of Uniform Traffic Control Devices* (MUTCD), *Queensland Guide to Temporary Traffic Management*, *Traffic and Road Use Management* (TRUM)

manual, and Austroads' *Guide to Temporary Traffic Management* provide guidance on the use of regulatory and warning signs, and pavement markings.

There is limited guidance available (except for National Parks) on interpretive signs to communicate a historical or cultural context. There is also limited guidance on pavement markings used to communicate behavioural information to walkers. Guidance is provided in Section 7 of this Guideline.

Table 2.2 – Existing guidance on non-wayfinding aspects of the walking environment

Document	Context applied to	When should this be used?
Australian Standard AS 1428 *Design for Access and Mobility* • Part 1: General requirements for access – New building work • Part 2: Enhanced and additional requirements – Buildings and facilities • Part 5: Communication for people who are deaf or hearing impaired	Australia-wide guidance for providing access to / within buildings for people with mobility and vision impairments	For guidance on non-wayfinding signs (such as facility identification signs and warning signs) that can be read by people with mobility and vision impairments
Australian Standard AS 1743 *Road signs – specifications*	Australia-wide regulation	For guidance on developing new symbols and road signs that are not already covered in an Australian Standard; the process for developing new symbols is applicable to new signs for walkers
Australian Standard AS 2156 *Walking Tracks* Part 1: *Classification and Signage*	Australia-wide guidance for walking tracks / trails in National Parks	For guidance on the information that should be provided on signs for walking tracks / trails in National Parks
Austroads *Guide to Temporary Traffic Management* (AGTTM)	Australia-wide guidance for construction sites, special events and detours	For guidance on providing warning and regulatory signs for footpath closures and detour routes for walkers
Austroads *Guide to Traffic Management* (AGTM) Part 10: *Transport Control – Types of Devices*	Australia-wide guidance	For guidance on the installation and maintenance of all types of signs and pavement markings that are installed in the road reserve
Bus Network Infrastructure Signage Manual *Rail Network Infrastructure Signage Manual*	Statewide guidance for bus and rail stations	For guidance on selecting which non-wayfinding signs should be installed within public transport stations
Institute of Public Works Engineering Australasia *Queensland Street Design Manual*	Statewide guidance for street design	For guidance on planning and designing new residential streets and neighbourhoods
International Organisation for Standardisation ISO 7001 *Graphical Symbols – Public Information Symbols*	International guidance for the design of sign symbols	For selecting a symbol (to be used on a sign) where an approved symbol (for use in Queensland) is not available to convey a message

Document	Context applied to	When should this be used?
Queensland *Manual of Uniform Traffic Control Devices Part 1 General introduction and index of signs*	Statewide guidance	For guidance on the installation of signs including minimum mounting heights and set back distances from the kerb
Queensland *Manual of Uniform Traffic Control Devices Part 9 Bicycle facilities*	Statewide regulation	For guidance on managing the interaction between cyclists and walkers using signs and pavement markings
Queensland *Manual of Uniform Traffic Control Devices Part 10 Pedestrian control* and *protection*	Statewide regulation	For guidance on designing pedestrian crossing facilities (including identifying the regulatory and warning signs that are required at crossing facilities)
Queensland Housing Code and *Model Code for Neighbourhood Design*	Statewide guidance for street design	For guidance on improving the safety and comfort of the walking environment in existing neighbourhoods
Queensland Parks and Wildlife Services (QPWS) Sign Manual	Statewide guidance for walking tracks / trails in National Parks	For guidance on non-wayfinding signs such as regulatory and behavioural signs that communicate how walkers should behave in National Parks

3   Why wayfinding guidance for walkers is needed

Research and global best practice confirm that people walking have specific and unique wayfinding needs, different to those of people riding bikes and different to those of motorists. This section outlines the distinct needs and characteristics of walkers (compared to other road users) with respect to wayfinding and why these are significant in developing wayfinding signage for walkers.

3.1   *The unique needs and characteristics of walkers*

The unique needs and characteristics of walkers as they relate to wayfinding are outlined following. Comment is included on how these are not currently addressed in existing guidance.

Information on journey time has more of an influence on people's decision to walk than distance, as people find it difficult to judge how long it will take to walk a certain distance. Existing wayfinding signage in Queensland often makes use of distance and, therefore, is not optimised for walkers.

Walkers do not always travel on defined routes, valuing connectivity and personal security, which makes their behaviours harder to predict. Existing wayfinding signage in Queensland is largely tailored for cyclists and motorists who need to travel on defined routes. This does not account for the multiple routes that walkers may wish to take.

People walk at slower speeds than when using other modes (such as cycling or driving); therefore, they can take the time, if needed, to look around for information and other distinguishing features of an area to help orientate themselves and choose a suitable route. They are also more able to stop and read signage. This means more information can be provided on certain types of signage for walkers, than is provided on signage for other road users.

Walkers do not travel as far or as fast as other road users and make more of an investment in time when choosing to walk. In Queensland, the hot and humid climate can discourage walking – especially walking at pace. People are also more likely to be deterred from walking if they are concerned about wasted time and effort. As such, the locations which would be most usefully signed for walkers will typically be closer than for other road users.

Walkers travel for different reasons to other road users and can be classified as either 'striders' or 'strollers'. Striders tend to be familiar with areas and, therefore, have less need for signage. They generally place a higher value on efficiency (for instance, completing their journeys in less time). Strollers tend to explore their environments and, therefore, require more information on what is nearby to aid their explorations. There is a limit to the amount of information which can be included on directional signage (such as that already in place across Queensland for other road users) and, therefore, map-based signage may provide greater benefit in some places.

3.2   Incorporating the needs of walkers into wayfinding signage

Wayfinding can be made easier for all road users, irrespective of the mode that they are using, by providing signage which supports users in building mental maps. Given the key differences between people walking and other road users described previously, the execution of this needs to be tailored for walkers – for example:

- Place hierarchy: Signage can help walkers build their mental maps by clearly showing a hierarchy of information. Figure 3.2 shows walkers that they are in Wynyard, specifically on York Street. If they go straight on, they can get to Circular Quay (and, specifically, to the Sydney Opera House, a destination in Circular Quay). Using this hierarchy of information helps walkers to understand where they are now and how their current location relates to other locations in the vicinity.

- Progressive disclosure: Progressive disclosure means only giving people the level of information that they need at each step of their journeys to reach their destinations; this entails gradually revealing more detail as they continue along their journeys. Providing people with more information than they need can lead to information overload, making it more difficult for walkers to find the information they really need; for example, if wayfinding is provided from one area to a town centre, the signs should point to the town centre until a walker has reached its edge. At this point, signs should point to specific locations within the town centre.

- Landmarks: Orientation can be further aided using landmarks. Showing walkers representations of distinctive features in their environments can help them to locate themselves and recognise their surroundings when walking. Landmarks can also assist people who are vision impaired, as different sounds (such as the sound of water) may help people to orientate themselves.

Figure 3.2 – Legible Sydney sign illustrating place hierarchy

Source: Legible Sydney Wayfinding Strategy, City of Sydney, 2012

3.3 Interface between pedestrian and bicycle wayfinding

In Queensland, cyclists are legally allowed to use the footpath (unless signed otherwise) meaning that, by default, all footpaths are shared paths. Addressing the interface between pedestrian and bicycle wayfinding is a key consideration for the Queensland context and this is discussed further following.

Bicycle wayfinding is not optimised to the needs of walkers. It is, therefore, recommended that, where possible, information for walkers is provided on a separate sign system; for example, bicycle wayfinding is often provided on defined routes that are much longer in length than the distance most people would walk. As a result, in many instances, it will not be appropriate to provide signage for walkers along the full route. An exception would be if there are focal points along the route within a walkable 15-minute distance. In these instances, pedestrian wayfinding should be provided to direct walkers to relevant focal points on and off the route.

As shown in Figure 3.3, pedestrian wayfinding is recommended where groups of focal points (relevant to walkers) have been identified adjacent to a cycle route. If there are multiple groups of focal points along a cycle route, it is not best practice to provide pedestrian wayfinding between them if they are more than a 15-minute walk (approximately 1.2 km) apart. Refer to Section 6.3 for further explanation on focal points.

Figure 3.3 – Example of where wayfinding for walkers is recommended on a cycle route
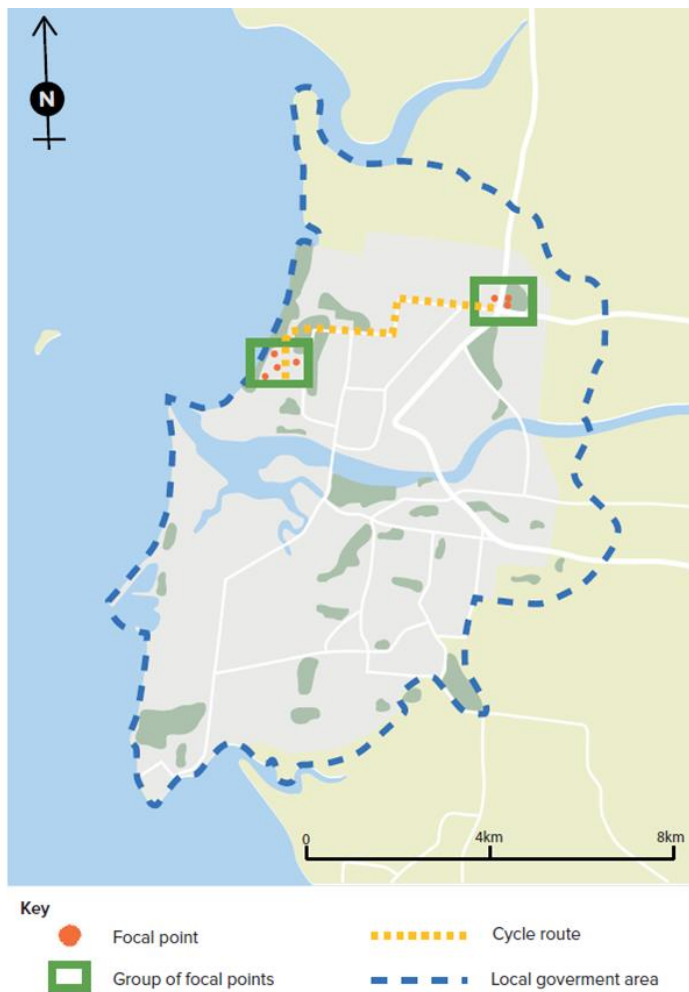
The frequency of bicycle wayfinding on signed cycle routes is not optimised to the needs of people walking, as walkers generally travel shorter distances than people riding a bike. This means that the distance between bicycle wayfinding signs may be greater than the total distance a person would walk; therefore, additional pedestrian wayfinding signage may be required along the route. This will provide reassurance to walkers they are on the correct routes and help them make decisions about when they may want to turn off in order to access specific focal points.

3.4   Pedestrian signage and improved safety outcomes

It is also recognised that safety for walkers can be improved if pedestrian wayfinding and signage is developed which considers their specific needs. This will contribute to a Safe System approach, by encouraging people to walk using routes that are safe.

For more information on the Safe System approach, refer to Section 2 in Austroads *Guide to Road Design Part 1: Introduction to Road Design.*

4   Principles for wayfinding

As discussed in Section 3, the unique needs and characteristics of walkers mean that specific principles are needed to deliver effective wayfinding for walkers. This section outlines these principles and why they are important.

The principles for wayfinding are described as 'the Five Cs' and comprise:

1.   consistency

2.   conspicuity

3.   clarity of information

4.   continuity, and

5.   completely accessible.

Each is described in detail following.

4.1   Consistency

Pedestrian wayfinding should be provided in a consistent manner to allow people walking to recognise wayfinding signage 'subliminally', without having to spend too much time searching for information.

Consistency can be achieved by using a single signage family across the whole of the identified area. This means several sign types (for example, fingerposts, totems and trail markers) can be used as appropriate in different locations while retaining consistency in appearance and information.

Figure 4.1 shows the Sunshine Coast signage family and illustrates how different sign types can be designed to be easily recognisable as part of the same signage family.

Figure 4.1 – Sunshine Coast wayfinding signage family
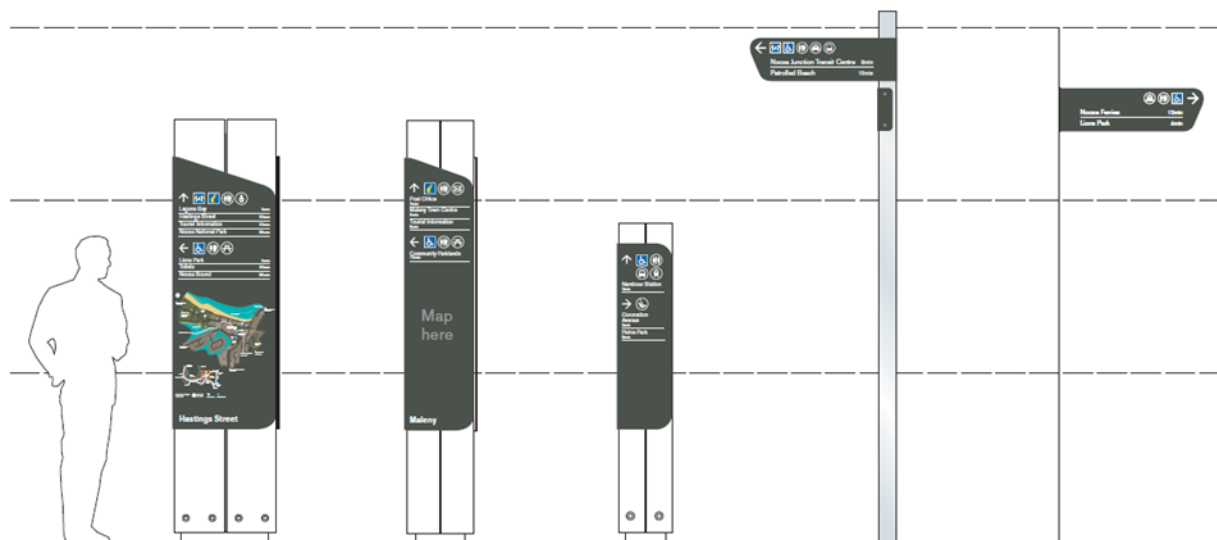
Source: Sunshine Coast Regional Wayfinding Signage Manual, Sunshine Coast Council, 2011

4.2   Conspicuity

The design and placement of signage should be conspicuous so it is easily recognised by walkers. While wayfinding should be *consistent*, it should also be distinct from other types of wayfinding signage and stand out against the background of the wider urban environment. This makes wayfinding signage for walkers recognisable, without detracting from the surrounding environment or existing signage aimed at other road users or for other purposes.

It is also important that signage is placed in a conspicuous location so it is easy to anticipate where to find it, and that it is visible and accessible (while minimising any clutter or obstruction to walkers). This is shown in Figure 4.2. Signs should be located at right angles to the direction of travel and be visible from key origins and destinations such as exits from public transport interchanges or car parks.

Figure 4.2 – Conspicuous placement of wayfinding signage
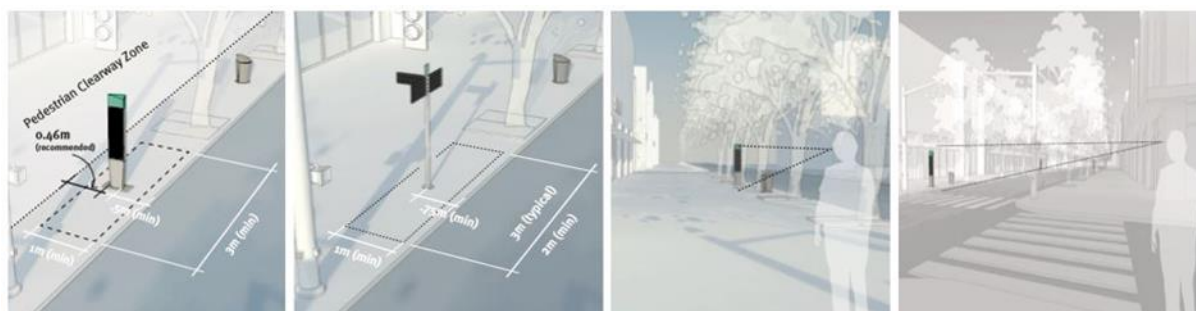
Source: Toronto 360 Wayfinding Strategy, City of Toronto, 2012

4.3   Clarity of information

The information contained within wayfinding signage should be both accurate and easily understood by people walking. Graphics and text should be of a legible size from the likely reading distance. Font type and colour contrast can also improve clarity of information.

Using internationally-recognised symbols can be an effective tool when communicating information to people, particularly in complex environments, or where there are people who speak Languages Other Than English (LOTE). See ISO 7001 *Graphic Symbols – Public Information Symbols* for guidance on internationally recognised symbols.

Information must be clear and laid out in a way that is easy to understand. To support this, the style of writing for text on signs should use 'Plain English'.

The naming of destinations should reflect how they are commonly understood by those in the local area and the naming of destinations should be consistent across the wayfinding signs. Identifying a specific destination by a name that is 'officially correct' but is not recognisable by most walkers can be misleading and confusing. Engaging with local communities can help to establish appropriate naming, although this should be considered against other recognised sources of navigational information (such as Google Maps), to reduce confusion for those using multiple types of wayfinding support.

Other languages could be incorporated onto wayfinding signs if felt appropriate through community and stakeholder engagement. Providing information in more than one language will need to be carefully considered to balance the needs of walkers with sign legibility.

It is recommended that Plain English and internationally-recognised symbols are used for all wayfinding signs, to help communicate information to people who speak LOTE.

Queensland Health Wayfinding Design Guidelines defines Plain English as:

> *Clear straightforward expression, using only as many words as are necessary. It is language that avoids obscurity, inflated vocabulary and convoluted sentence construction. It is not baby talk, nor is it a simplified version of the English language.*

See ISO 7001) for guidance on internationally recognised symbols.

4.4   Continuity

Wayfinding signage should be provided in a manner that is continuous along a walker's journey and should not disappear partway through the journey. This is critical so walkers can navigate their entire journey confidently. Wayfinding signage should also be provided along all the pathways a walker may take so navigational support is provided along all feasible routes.

4.5   Completely accessible

It is important that wayfinding systems are appropriate for all potential walkers. Signage should be designed to accommodate those who may have a disability, such as vision, hearing, physical or cognitive impairment; however, it is important that walkers who require additional design features to support accessibility are also considered, such as LOTE speakers. In certain instances, signage alone may not be enough to fully accommodate these walkers.

Technological solutions, such as Quick Response (QR) codes, may support and enhance wayfinding signage but should not be used as the sole solution. This is discussed further in Section 5.8.

There are several design elements which support the delivery of completely accessible wayfinding signage. These are listed following and discussed in detail in Section 5:

- use of a bright identifier strip so walkers can see the sign

- use of graphics and internationally-recognised symbols, in addition to text

- use of colours with enough visual contrast

- information displayed at an appropriate size and height

- use of braille and tactile ground surface indicators (TGSI) where appropriate, and

- use of technology where appropriate.

The principle of 'completely accessible' does not take precedence over the requirements set out in AS 1428 *Design for access and mobility*.

Signs need to be installed in a location that is clear of the expected path of travel of walkers (the 'through route') and where there is enough space for a person with a vision or mobility impairment to get close to the sign so that he or she can read it. Further guidance is provided on this in AS 1428.2 *Design for access and mobility: Enhanced and additional requirements – Buildings and facilities.*

The Cooperative Research Centre has a set of guidelines for wayfinding. These provide additional guidance for the provision of wayfinding for those with disabilities and should be consulted for further support. It also includes guidance for the use of technological solutions to support people with disabilities.

4.6 Important considerations

In addition to the principles identified, it is important the user also considers the following when developing and implementing wayfinding:

- Minimise signage clutter: If there are multiple signs that provide information to a walker in one location, consider whether the information contained on these signs could be provided on one sign to reduce signage clutter.

- Use new signs sparingly: It is important that signs are only used when they are needed to meet the objectives for the wayfinding system.

- Whole-of-life costs: The number and type of signs selected, and the design and materials used should consider the costs associated with manufacturing, installing and maintaining them. The design and material of the signs should reflect the environmental conditions and climate of the area to ensure longevity of the signs.

5 Developing a wayfinding signage family

This section provides guidance on the design elements that should be included on wayfinding signage following international best practice principles. A family of wayfinding products ('the signage family') has been developed to illustrate this. This section sets out the different sign types that are included in the signage family, the recommended structure of the signs and the format of the information contained on them.

It is recommended users of this Guideline develops their own signage family that includes the same types of signs shown in this section. Having a family of signs ensures the design of wayfinding signs is consistent across an area.

5.1 Example signage family

To build familiarity and recognition of the wayfinding system, a shared design language should be adopted across the signage family. This includes the consistent use of colours, graphics, dimensions, location of features and the appropriate use of each sign.

The types of signs included in the example signage family are shown in Figure 5 1 and include the following:

- maxi-totems: these are generally provided at strategic locations and provide directional, identification and informational wayfinding

- mini-totems: these are provided at key intersections or decision points or in locations where there is limited space for a maxi-totem and generally contain the same information as a maxi-totem but are narrower in width

- transport totems: these are located at the entrance to transport stations, combine a maxi-totem with an identifier for the transport network and contain the same directional, identification and informational wayfinding as maxi-totems

- fingerposts: these provide directional signage to specific locations nearby

- wall-mounted signage: these are used in locations where a totem may affect the usable width of the walking route and contain directional, identification and informational wayfinding, and

- trail markers: these signs are provided on a trail, to help walkers to identify that they are on a defined route and which way they should go to continue along that route.

Figure 5.1 – Queensland signage family

Maxi-totem   Mini-totem   Transport Totem   Fingerpost (new post)   Fingerpost (existing lampost)   Wall-Mounted   Trailmarker
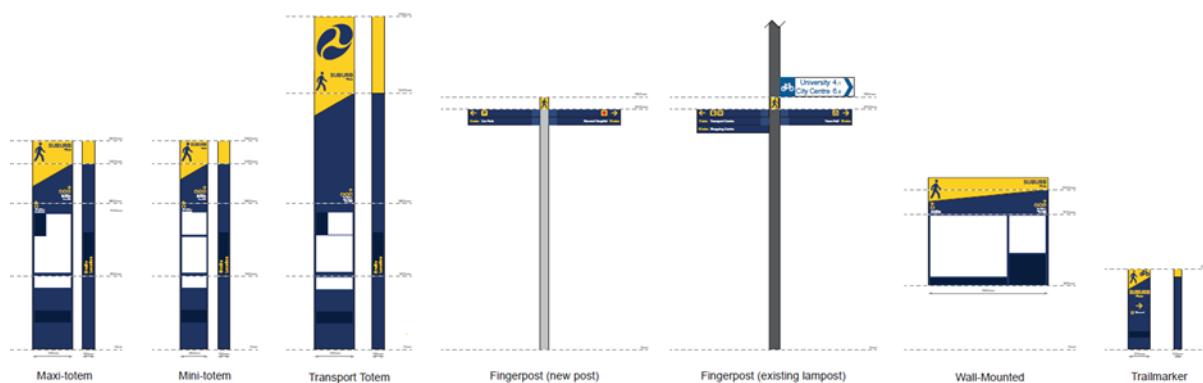
5.2   Signage layout

Wherever possible, all wayfinding products in the same signage family should adopt the same colours, fonts and symbols.

5.2.1   Colour

Users should create a colour palette for their signage family that includes two colours: an identifier colour and a background colour.

The identifier colour, used for the identifier strip at the top of the sign, should be a bright colour so that the sign is conspicuous in an urban environment. To provide strong colour contrast with the identifier strip, it is recommended that the background colour is a dark colour. This is shown in Figure 5.2.1.

Figure 5.2.1 – Example colour palette demonstrating best practice in terms of contrast and luminance

Maxi-totem
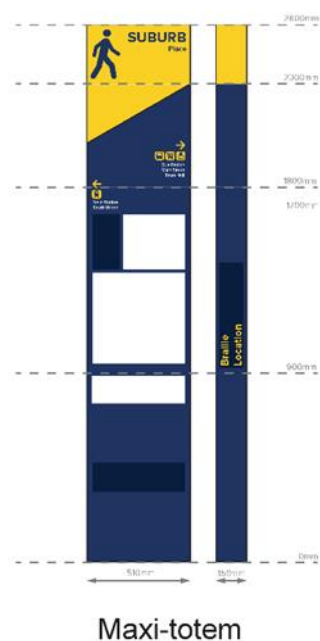
The identifier colour should also be used for the directional arrows, symbols and key text on the sign.

The colours that are selected for a colour palette could reflect the local identity, heritage or context of the area. The colours may also be based on corporate branding colours.

> When selecting a colour palette, note that colour contrast does not necessarily provide luminance contrast. Luminance contrast is the contrast in light reflectivity between surfaces. AS 1428.2 recommends a minimum luminance contrast of 30% between the text and symbols of a sign and its background. Luminance contrast will be affected by the materials used for different components of the signs and this should be carefully considered.

5.2.2 Font

The user should select a sans serif font for the signage family as this is highly legible, and text on the signs should use sentence case, with capital letters being used only at the start of a sentence or proper pronoun, to improve the readability of the sign.

Upper case text should be used for the 'suburb name' (or the highest place hierarchy used) located on the identifier strip at the top of the totem signs. This will make it easier for walkers to identify a wayfinding sign from a distance. The font height of the 'suburb name' should be selected based on ensuring legibility, given the expected distance that people will see the sign.

5.2.3 Symbols

Symbols should align with those used in the Queensland *Manual of Uniform Traffic Control Devices* (MUTCD), approved Traffic Control (TC) signs, the *Queensland Signage Manuals for Bus and Rail Stations*, and the *Queensland Parks and Wildlife Services Sign Manual*. Where these manuals do not provide the required symbols, internationally-recognised symbols (as per ISO 7001)) and locally-recognised brand logos should be used. If there is a need to develop bespoke symbols, the

method set out in AS 1743 *Road Signs – Specifications* should be used to develop and test their suitability.

AS 2156 *Walking tracks* specifies six classes of walking tracks and provides guidance on how to classify the difficulty of a track according to those six classes. Signs installed on walking tracks that have been graded using the classification system should incorporate a symbol that indicates the difficulty rating assigned to that track. Refer to AS 2156 for further guidance on the classification system.

5.3 Identification information

Each sign should be easily identifiable as part of the wayfinding system. This is achieved through the consistent use of identifiers and symbols.

5.3.1 Identifiers

A walking symbol should be used on all products, clearly displayed in the identifier strip, to allow quick recognition of the products (see Figure 5.3.1). The walking symbol shown in the example signage family has been taken from the Queensland signage manuals for bus and rail stations. Alternative walking symbols may be used from one of the documents specified in Section 5.2.3.

Figure 5.3.1 – The identifier strip on the signage
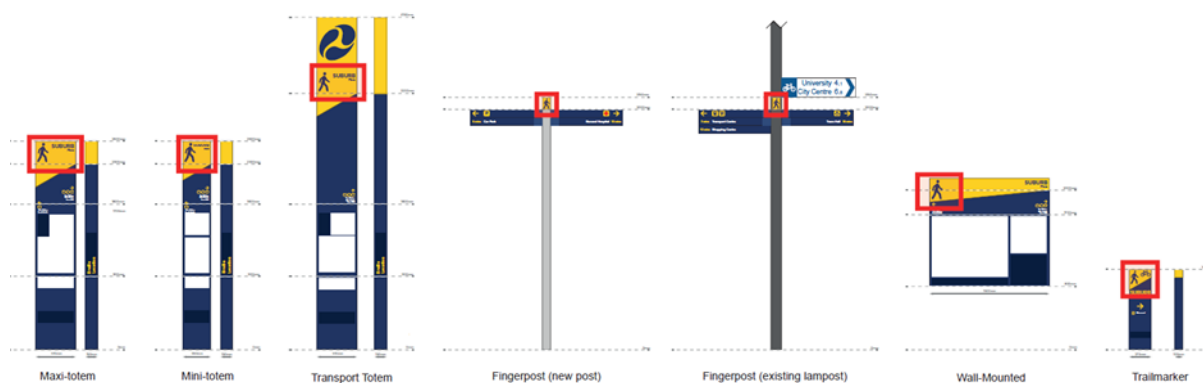
When developing a signage family, an identifier strip should be maintained at the top of the signs. The identifier strip in figures 5.2.1 and 5.3.1 is diagonal across the sign. An alternative shape for the identifier strip can be used but it should not affect legibility of the sign.

5.3.2 Logos

Logos are designed to be included on the signage to indicate to the walker the authority or organisation (for example, local government) responsible for managing the area the walker is in and/or for installing and maintaining the signs.

For the totem signs, the wall-mounted sign and the trail marker, logos should be shown at the bottom of the signs so this information is separate from the locational information and the directional information (which is more relevant to walkers).

For the fingerposts, there is less space to show logos. The logos should be shown on the inside of the fingerpost blade (next to the fingerpost pole), away from the directional information.

The user should carefully consider the number of logos that should be included on the signs, as providing too many logos can reduce the readability of them.

The recommended locations for logos are demonstrated on the signage family in Figure 5.3.2.

Figure 5.3.2 – Location of logos on signage
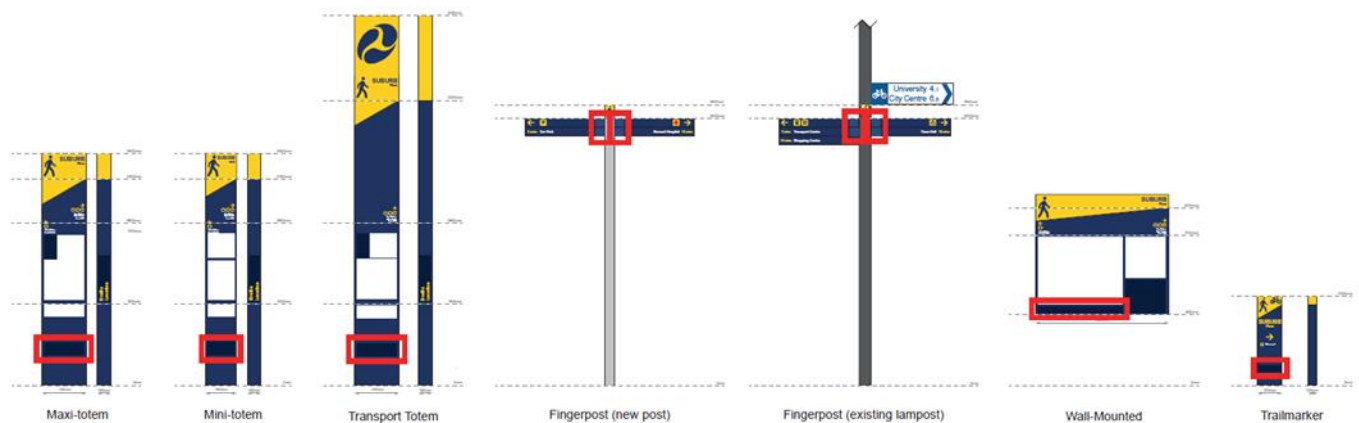
5.4   Locational information

Locational information allows walkers to identify their location clearly. This information is important so walkers know where they are when they begin routes; provides reassurance of key locations they pass along the way; and helps identify when they have arrived at their destinations.

The maxi-totem, mini-totem, transport totem, wall-mounted signage and trail markers are all designed to provide locational information. This should be presented in large font, above head height (for all except the trail marker) so that walkers can clearly identify the location they are in (see Figure 5.4).

The suburb name (or highest place hierarchy used) should be provided at a text size which is appropriate for walkers to read at a distance. It is important to use the most appropriate and recognisable name for the suburb.

Figure 5.4 – Locational content of signage
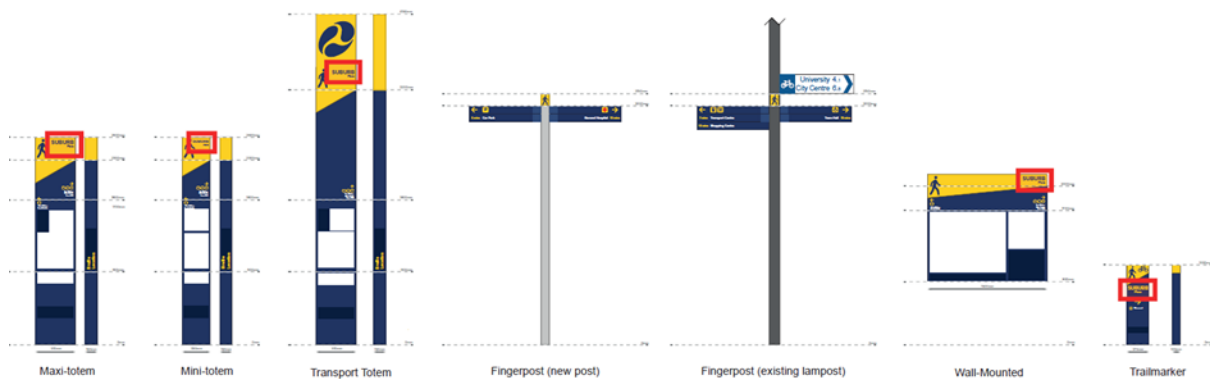
5.5   Directional information

Directional information is provided for the main focal points to which people may want to walk from their current locations. It succinctly advises them of the direction they should go and the duration of journey they should expect to their destination.

The maxi-totem, mini-totem, transport totem, wall-mounted signage and fingerposts are all designed to provide directional information. This is shown in Figure 5.5.

The following is recommended for all directional signage:

- concise and appropriate place names which are informed through engagement with stakeholders

- the top row of directional signage should provide symbols of the key destinations with names of destinations listed underneath: symbols should be limited to main attractors, for example train stations, civic buildings, main shopping areas

- the top row of directional signage should also provide symbols of features that may affect whether a route is useable by a person with a disability, such as stairs or lifts – other attractors such as water bubblers and cycle parking should not be included because they can reduce legibility of the sign

- distances in walk time should be provided adjacent to destinations, and

- directional information should be ordered, from top to bottom, with the closest destination first and the furthest away destination last. Fingerpost blades should be mounted on the fingerpost according to this order.

Figure 5.5 – Directional information on signage

Maxi-totem   Mini-totem   Transport Totem   Fingerpost (new post)   Fingerpost (existing lampost)   Wall-Mounted   Trailmarker
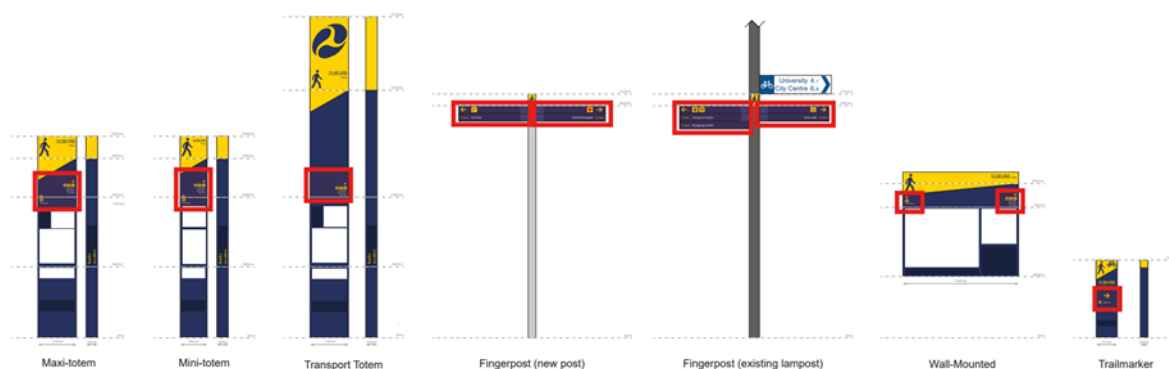
5.6   Map-based information

Mapping allows walkers to understand their current locations and how that relates to their surroundings. Clear, well-ordered mapping allows walkers to formulate routes between their current location and desired destination.

Two maps should be provided on map-based signs such as the totems and wall-mounted signage. This should include a larger map that provides a more detailed view of the immediate area and a smaller map that shows the wider context in less detail.

The larger map should cover an area slightly larger than a five-minute walking area and the smaller map should cover a 15-minute walking area. The distance that is walkable in five minutes and 15 minutes will depend on factors such as age and ability of the walker, weather and topography.

The *Global Street Design Guide,* Global Designing Cities Initiative and National Association of City Transportation Officials (NACTO) provides guidance on walking speeds. It explains that walking speeds range from 0.3 m/s–1.75 m/s. This recommends that a walking speed of 1.4 m/s is used for calculating how far a person could walk and is the maximum speed that a person in a wheelchair could be expected to travel. This allows destinations of up to 420 m to be included within a five-minute walking distance and destinations up to 1260 m to be included within a 15-minute walking distance.

5.6.1   A–Z street finder

An A–Z street finder should be provided on the totems and correspond with grid references shown on the five-minute map. The A–Z street finder should include two lists. The first is a street finder which lists all streets shown on the five-minute map in alphabetical order, along with corresponding grid references. The second is a landmark finder which lists all key landmarks shown on the five-minute map in alphabetical order, along with corresponding grid-references. Alongside the A-Z street finder, if space permits, a key can also be provided, explaining the symbols used on the five-minute map.

Suggested locations for the A–Z street finder can be found in Figure 5.6.1(a).

Figure 5.6.1(a) – A–Z street finder on totems and wall-mounted signage
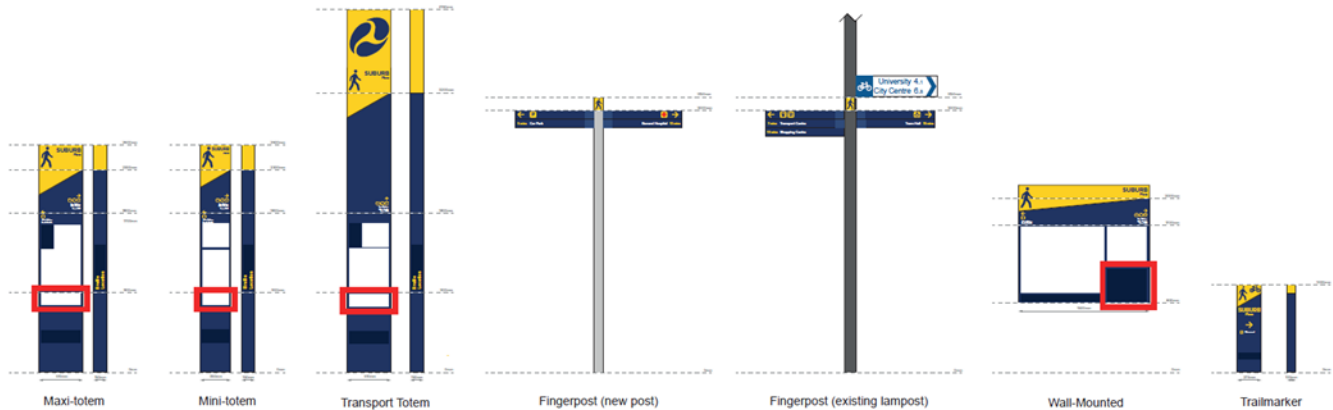
An example of an A–Z street finder is provided in Figure 5.6.1(b). This is based on the five-minute walk map in Figure 5.6.3.1(a) provided further on in this Guideline.

Figure 5.6.1(b) – A–Z street finder example

5.6.2   Walk times to key destinations

The fingerpost signs should include the walk times to the destinations that are included on the sign.

Walk times may also be provided on the maxi-totem and transport totem as a list. This list would usually include transport hubs and important destinations in the area, along with the walking times to these locations. The list is usually grouped according to type of destinations; for example, all train stations together, all bus stations together and all visitor destinations together.

Walk times are essential for the fingerposts but should only be provided on the totems if space permits. It is recommended this is provided adjacent to the 15-minute walk map and this is shown in Figure 5.6.2(a).

Figure 5.6.2(a) – Location of walk time information on totems
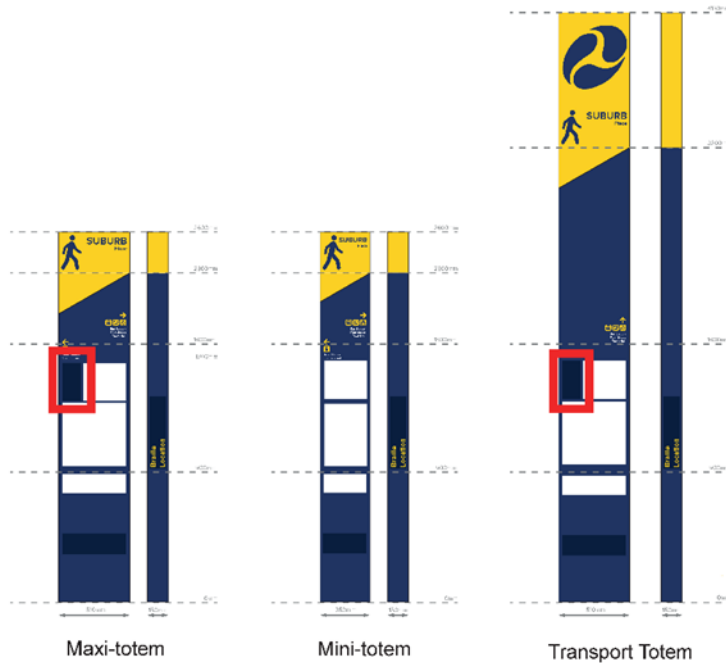
An example of what this would look like is provided in Figure5.6.2(b). This is based on the 15-minute walk map in Figure 5.6.3.1(b) provided further on in this Guideline.

Figure 5.6.2(b) – Walk times to key destinations example

Walking from here

Ocean Hotel	4 min
The Royal Theatre	5 min
Art Centre	5 min
The Mall	8 min
Riverside Hotel	10 min
Town Hall	14 min
The Grand Hotel	14 min
Bowls Club	17 min
Beach Art Gallery	17 min
Green Park	5 min
North Beach	16 min
Queens Park	18 min
Sports Club	19 min

5.6.3   Design of the maps

The design of the maps, the content it includes, and the hierarchy of information is important so walkers can navigate using the information displayed on the sign. Depending on the complexity of the area being mapped or the amount of information that needs to be displayed, the maps may need to be produced using a graphic design software; however, if the user has a base map that is clearly legible, this may be used.

For all mapping, the following should be provided.

- Heads-up mapping: this means the maps should be orientated to align with the walker's view from his or her location. The maps should not be oriented to north unless this is the direction the walker is facing.

- Walk circles: both maps should include circles highlighting how far a person can walk within a given time period from his or her current location. On the five-minute walk map, a five-minute walk circle should be shown. On the 15-minute walk map, a 15-minute walk circle should be shown. It is important to note that the five- and 15-minute walk circles are based on 'as the crow flies' distances.

- A 'YOU ARE HERE' marker: these should be used to show clearly where the walker is in relation to the map. The markers should be positioned at the centre of the walk circle and the map.

- Symbols for landmarks: the most prominent landmarks can be shown as three-dimensional graphics on the mapping. These should be located without obscuring other key information.

- Symbols for features that affect route choice: symbols can also be used to show any features or obstacles that affect whether a route is accessible for people with a disability such as stairs or lifts. Symbols should also be used to increase recognition of facilities, such as train stations, bus stops, toilets, water bubblers, bicycle parking or car parking; however, including too many symbols can clutter the map, reducing legibility.

- Place hierarchy: the maps should reference all levels of the place hierarchy used, such as suburb names, neighbourhood names, place names and street names. It is important to use the most appropriate and recognisable names.

- Street hierarchy: there should be a clear hierarchy of information with larger-scale elements shown more prominently, working down to a smaller scale of more localised features. This is shown in Figure 5.6.3.

Figure 5.6.3 – Hierarchy of information
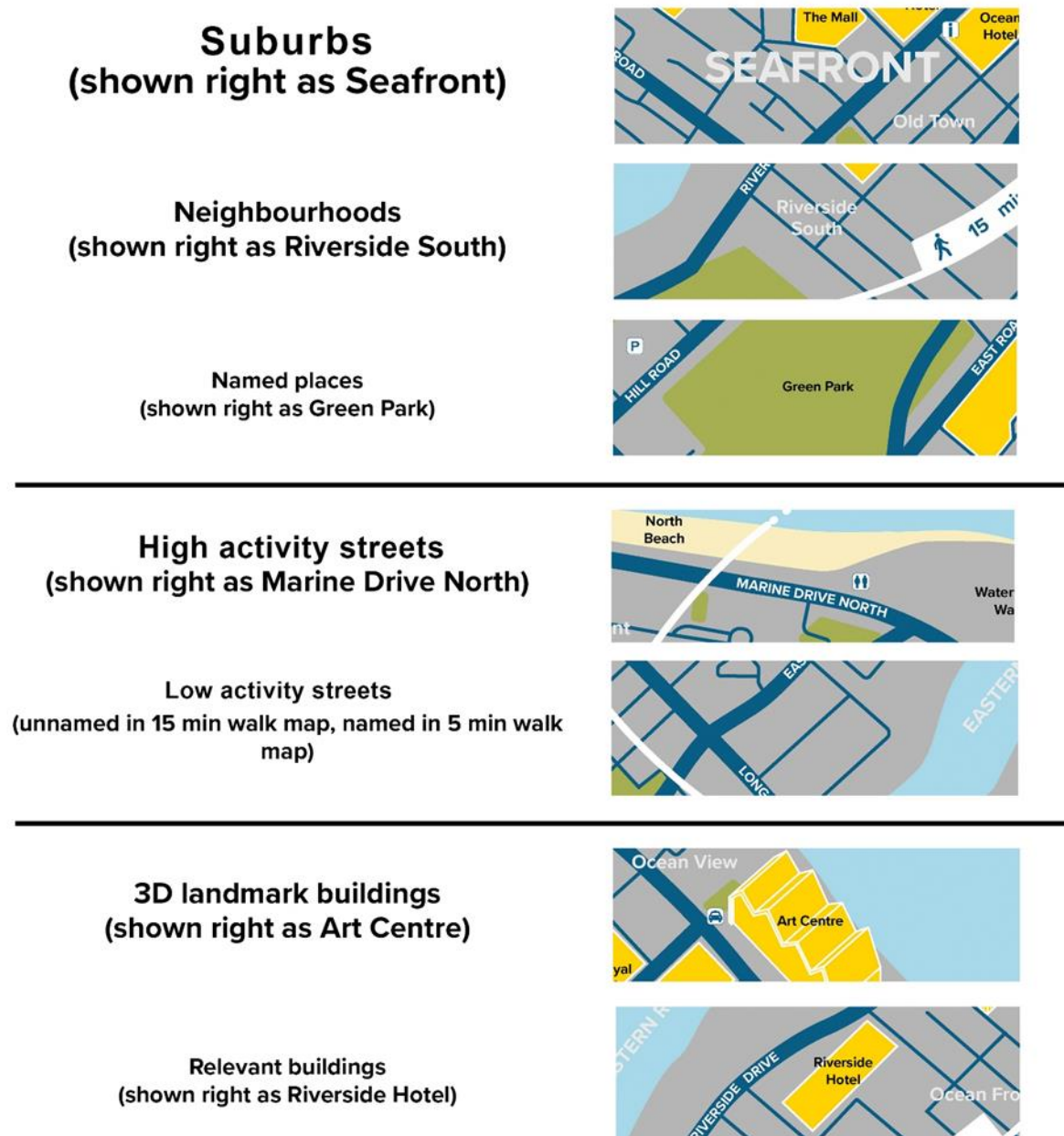
Streets with a high amount of activity are represented with a wider line. Streets with low activity should be represented with a thinner line.

Note: A high activity street may be a street with low vehicle volumes but high walking volumes.

The highest level in the place hierarchy (generally, an area) should be shown in the largest font size on the map; or example, figures 5.6.3.1(a) and 5.6.3.1(b) show three levels in the place hierarchy, with the suburb name shown in a large font to demonstrate it is at the highest level in the place hierarchy. Neighbourhood names are shown in the second largest font. Street names and destinations are shown in the smallest font size.

The number of levels in the place hierarchy will depend on the geographic extent of the area and the complexity of the environment. Some areas may only require two units in the place hierarchy (for example, neighbourhood and destinations).

5.6.3.1   The specific design elements of five- and 15-minute walk maps

In addition to the information previously stated, a grid should be overlaid on the five-minute walk map so that walkers can easily find streets using the A–Z street finder.

Figure 5.6.3.1(a) demonstrates these recommendations for a five-minute walk map.

Figure 5.6.3.1(a) – Example of a five-minute walk map
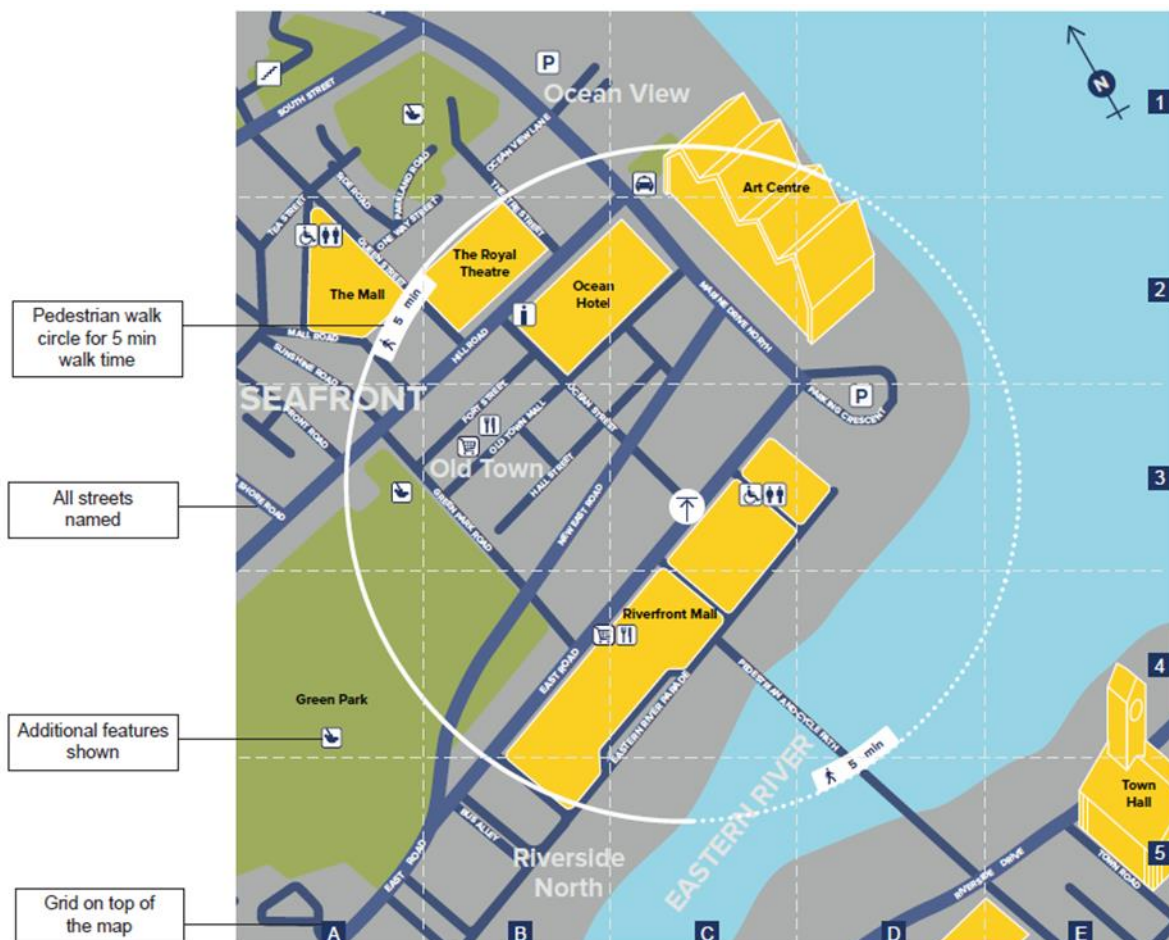
The following additional guidance is provided for 15-minute walk maps:

- to ensure the information contained on the maps is legible, only high activity streets should be named – low activity streets should not be named, and

- destinations outside the extent of the 15-minute walk map should be shown as an 'edge' location. Edged locations are represented in call-out boxes at the edge of the map with an arrow pointing in the direction of the destination. This makes it clear the destination is more than a 15-minute walk away.

Figure 5.6.3.1(b) shows the above recommendations for a 15-minute walk map.

Figure 5.6.3.1(b) – Example of a 15-minute walk map
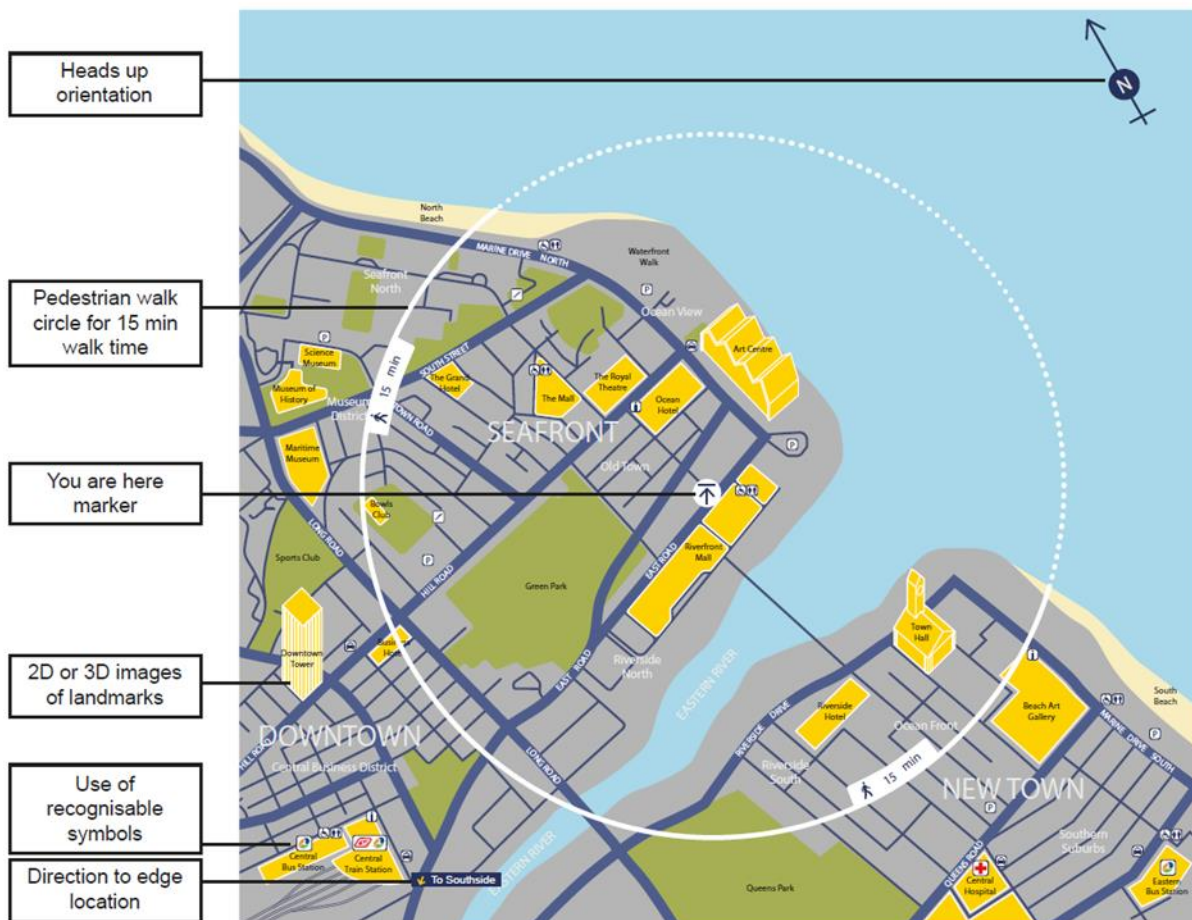
5.7 Incorporating accessibility needs

Wayfinding signage should be accessible to as many walkers as possible. The following should be considered when designing the signage family so it meets the principle of 'completely accessible'.

- Map and totem information should be between 900 mm–1800 mm in height, as per AS 1428. Fingerpost information should not be higher than 3000 mm.

- The colour palette should provide colour contrast between text and background, to improve legibility for those with impaired vision or cognitive impairments.

- As noted in Section 5.2.2, Australian Standard AS 1428.2 *Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities* states that a minimum

luminance contrast of 30% is required between text and symbols and their background, to assist people with low vision. Signage manufacturers should use materials that reduce the likelihood of glare.

- Locally- and internationally-recognised symbols have been recommended for use as these can assist people with cognitive and language impairments. Any new symbols created should refer to AS 1743 which outlines the requirements for testing the suitability of new symbols.

- Ensure there is space for braille location identifiers on the side of all totems. This is discussed further in Section 5.7.1.

- Technology may complement pedestrian wayfinding signage and improve the accessibility of the signage for people with disabilities. As technology for wayfinding is a rapidly-evolving area, technology should not be used as the sole solution for wayfinding. This is discussed further in Section 5.8.

- For further information on measures to increase accessibility of wayfinding signage, refer to AS 1428 and the Cooperative Research Centre *Wayfinding Design Guidelines Report* which includes guidance on providing wayfinding signage for people with disabilities.

- Fingerpost information should be mounted at a height lower than 3000 mm, so it is readable by people walking. The Queensland MUTCD Part 1 *General introduction and index of signs* provides guidance on the minimum mounting heights permitted in Queensland.

5.7.1 Application of braille

Including information in braille increases the inclusivity of the wayfinding system, allowing braille readers to identify their locations so they can orient themselves throughout their journeys or when arriving at their destinations; however, there are some limitations of braille, which are noted following.

- Braille can be expensive to install and maintain.

- If there is a large amount of information contained on a sign, it may not be possible to communicate all that information using braille, because a large amount of sign space will be required.

- It is not a one-size-fits-all solution – not everyone with a vision impairment can read braille.

Some information should be provided in braille on wayfinding signs. This should be done in consultation with Vision Australia, Blind Citizens Australia or another local disability advocacy group (that understands the navigational requirements of people with vision impairments). These groups will be able to assist the user with deciding what information needs to be communicated via braille.

5.8   Application of technology

Technology is not the sole solution for wayfinding because:

- certain solutions require a person to be digitally literate, have a mobile or other specific device, and have an internet connection

- technologies that use Global Positioning System (GPS) to support navigation may suffer signal loss, particularly in underground or built-up environments

- mobile-based navigation using GPS are not sub-metre accurate, affecting their accuracy in highly-complex environments

- technology is a rapidly-evolving area, meaning a technological solution can be obsolete within years or months of being implemented, and

- digital displays require the sign to be connected to an external power source; this means they can be expensive to install and maintain. Digital displays can also be hard to view in certain lighting conditions and can create glare for the person using the sign.

If a user wants to incorporate a technological solution into a wayfinding system, it is important to consider the cost and resource implications fully.

5.9   Incorporating local identity

Many local government areas in Queensland cover a large geographic extent and may include towns or precincts that have distinct identities. A different colour palette may be used for these different areas or precincts.

Users may also select different materials for wayfinding signs to reflect the local identity or heritage of their areas; for example, Moreton Bay Regional Council has adopted a signage family (Figure 5.9) that uses a textured concrete material to reflect the local identity.

Figure 5.9 – Moreton Bay wayfinding signage family
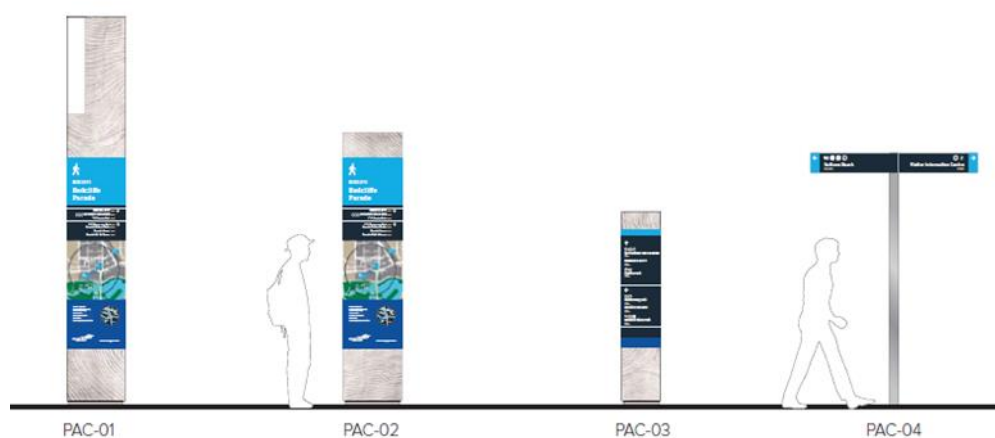
Source: *Moreton Bay Regional Council Wayfinding Style Guide*, Moreton Bay Regional Council.

The materials selected should not compromise the longevity of the sign. The layout of information of the signs should be similar, regardless of the colour palettes or materials that are used for the sign. This will maintain consistency of the wayfinding system and help walkers easily identify wayfinding signs in different areas.

The user should refer to the *QDesign Manual* which provides further guidance on how local context could be incorporated into the design of wayfinding signs.

5.10 Temporary signage

The signage family discussed in this section is intended to be used for permanent wayfinding; however, at times, it may be appropriate to use temporary wayfinding, such as during construction works, temporary route closures / diversions or for special events.

Temporary signage should use the same design language as the family of permanent signage structures but can be created in more cost-effective materials – for example using corflute, corrugated plastic or adhesive overlays.

Temporary signage should use the same design language as shown in the signage family within this section and should include:

- the same colour palette

- an identifier strip with walking symbol, and

- the same font and international-recognised symbols.

Producing maps can be resource-intensive and may not be needed for temporary signs; however, if the temporary signs include a map, the design and format of the map should be consistent with the maps used for the permanent signage family. The size and scale of the map may need to be smaller, due to space restrictions.

Pavement markings are used to communicate regulatory and behavioural information to walkers (for instance, indicating which side of a footpath to use); however, they are not considered a best practice solution for the provision of wayfinding for walkers for the following reasons.

- Pavement markings require regular maintenance and replacement, given the wear from people walking over them. If they become unreadable, this can lead to gaps in the wayfinding network.

- Pavement markings can only communicate a limited amount of information. This is because:

  – the skid-resistant material used cannot support fine-grained information such as maps, and

  – people will be walking over them and so they need to be interpreted quickly without stopping.

- Walkers tend to look ahead for signage and navigational information as they are constantly looking for visual cues and landmarks to help build their mental map. This may mean they may not see pavement markings.

As discussed in Section 4.5, pavement markings may be appropriate in certain circumstances to guide vision impaired walkers between specific focal points. Pavement markings may also be used to assist with wayfinding for temporary / special events, such as between a transport hub and the entrance to an event.

6   How to deliver wayfinding signage for walkers

This section provides step-by-step guidance for the delivery of a wayfinding signage system for walkers, using the signage family outlined in Section 5. A worked case study can also be found in the Appendix.

The flowchart in Figure 6 illustrates the step-by-step process to follow when delivering wayfinding signage for walkers.

Figure 6 – Process for delivering a wayfinding signage system for walkers

Delivering pedestrian wayfinding signage

Step 1: Get started

Step 2: Select an area

Step 3: Identify focal points

Step 4: Identify and audit walking routes

Step 5: Identify confirmation and decision points

Step 6: Identify which signs to use

Step 7: Identify which destinations to sign to

Step 8: Produce a Signage Placement Plan and a Content Schedule

Step 9: Prepare for installation

As noted in Section 1, it may be beneficial to include a registered landscape architect or urban design professional in the process to achieve good place design and public realm outcomes with the signage.

The availability of resources, notably funding, may determine the signage provided.

This Guideline presents best practice, and wayfinding for walkers should be implemented as per the Guideline; however, if funding is constrained, the size of the area for wayfinding could be reduced and/or the installation of wayfinding signage could be phased. If a phased approach is adopted, signs should not direct walkers to a 'dead-end' or stop in the middle of a walker's journey.

It is important to consider the whole-of-life costs of signage, including both the initial installation costs and ongoing maintenance costs for both the physical asset and information content.

6.1 Step 1: Get started

The delivery of wayfinding signage should be shaped by the desired outcomes of providing the wayfinding signage. Examples of some of the common reasons for providing wayfinding for walkers include (but are not limited to):

- the need to reconnect disparate parts of the city (for example the rail station and the town centre)

- enhancing the performance of retail or other areas which might be difficult to find

- recognition that the area in question is hard to navigate without help, and

- encouraging people to walk by being explicit about how much time it takes to reach places on foot (as people routinely overestimate how long walking journeys take).

As discussed in Section 3, there are two broad types of walkers: striders and strollers. Their different characteristics and needs influence the amount of wayfinding information they need. The type of walker in an area should be considered by the user, as this may affect the wayfinding system.

6.2 Step 2: Select an area

Pedestrian wayfinding is typically provided for an area or precinct, as opposed to a single route, reflecting the characteristics of walkers. Desired outcomes will guide selection of the area which may have been identified through a plan, strategy or project responding to an identified need.

If there is insufficient funding available to deliver pedestrian wayfinding for the full extent of the area identified, it may be necessary to divide the area into 'sub-areas'.

A review should be completed to confirm the level of existing infrastructure to support walking in the selected area. This should consider, at a minimum, whether there are footpaths, off-road paths and safe crossing locations. Wayfinding should not be implemented in an area where there are gaps in safe walking infrastructure.

There are several elements that could be considered when selecting an area. These are summarised in Table 6.2.

Table 6.2 – Elements to consider when selecting areas for wayfinding

Element	Importance
Infrastructure	It must be confirmed there is safe infrastructure for people to walk. If not, this should be addressed prior to providing wayfinding.
Destinations of interest to walkers	Wayfinding will be more effective if there are places for walkers to go, within a walkable distance (that is, within a 15-minute walk).
Permanence of the walking environment	If there have been recent changes to the area, such as a new development, wayfinding may be needed to support navigation. In addition, if changes are planned soon (which will change how walkers navigate), temporary wayfinding may be more appropriate as an interim measure.

Element	Importance
Legibility of the walking network	The layout and complexity of an area can affect how easy it is for walkers to navigate without wayfinding signage. Areas that are more challenging for walkers to navigate should be prioritised; for example, grid-like street layouts are more legible and, therefore, easier to navigate than more convoluted street layouts.
Presence of walkers who are unfamiliar with an area	Tourists and visitors will be less familiar with an area than residents. If a location or area is likely to be visited by people who are unfamiliar with an area, those locations should be prioritised.
Existing wayfinding signage	The presence of existing wayfinding signage, and the extent to which it conforms with the 'Five Cs' should be considered. If there is wayfinding signage already present which helps walkers navigate or meets the project objectives, it may not be necessary to provide additional wayfinding signage.

6.2.1   Contextualising place hierarchy

The hierarchy of place described in Section 5.6.3 of this Guideline is an example only as it is important that users develop their own place hierarchy appropriate to the scale and complexity of the area; for example, in larger or more complex areas where multiple 'suburbs' are covered by a single wayfinding system, it may be appropriate to have more levels in the place hierarchy than in smaller, less complex areas. In this instance, suburbs, neighbourhoods and named places may be used, whereas, for a wayfinding system within a single suburb, it may not be necessary to include the suburb level of the place hierarchy and only neighbourhoods and named places may be used.

6.3   Step 3: Identify focal points

Once an area has been selected, the focal points for the area should be identified and recorded through a focal point map. 'Focal points' refer to:

- key origins and destinations: places that people travel from and travel to; for example, a focal point could be a public transport station, a car park building, a beach, sporting facilities, a park or open space, community facility, hospital or medical centre, and can include well-known streets, such as those providing retail or hospitality access, and

- key landmarks: distinctive places in the environment which walkers may use to aid orientation.

Note: In many parts of Queensland, the sea / coastline will be a major landmark.

A single focal point can be both a landmark and a key origin or destination; for example, a distinctive building such as a museum will likely also be a key destination.

Care should be taken when selecting focal points to consider the information needs of the people likely to be using the wayfinding signage. Focal points can be selected through community and stakeholder engagement so the most meaningful and important locations are captured; however, they should not be selected based on commercial interests. The local community can also help confirm the most meaningful names as this may differ from what is shown in official sources of information.

The focal points identified will depend on the complexity of the area; for example, it may be appropriate to include a bus stop on a focal point map in an area where there are few bus stops and no transport hubs, but may not be appropriate for an area with many bus stops or transport hubs.

6.4   Step 4: Identify and audit walking routes

The focal point map should be updated with the expected routes that people will walk between the different origins and destinations. There may be multiple routes that a person can take to walk between the same two locations. When deciding which route(s) to include on the focal point map, it is important to consider the connectivity and legibility of the environment. Walkers (particularly strollers) will not always take the shortest route if it is not legible. They may instead choose a route with a longer line of sight, or one which provides a higher-quality walking environment. These route choices will be informed by local knowledge and available data such as known walking desire lines and volumes.

New walking routes may also be identified and signed. These may be completely new routes or existing routes which are not well-used, but walkers are now being encouraged to use them as, for example, new street lighting has been installed to address previous personal safety concerns.

After identifying walking routes, a site audit should be undertaken to document:

- if there is safe walking infrastructure on the walking routes – if there is no safe access to a focal point, then the focal point should be removed from the map and should not be included in the wayfinding system until safe infrastructure has been put in place

- if there is enough ambient lighting on the walking routes so that people can read information contained on signs

- if there are features that will affect whether a route can be used by people with a disability such as lifts, stairs or ramps – this information may need to be included on the wayfinding signage

- the location and content of existing signage (see Figure 6.4) – if any signs show incorrect or contradictory information, they should be removed or replaced with the updated wayfinding signage, and

- any overlaps between walking routes and signed cycle routes. The provision of pedestrian wayfinding signage may not be needed if existing bicycle wayfinding signage meets the objectives.

Figure 6.4 – Existing Queensland wayfinding signage near Wynnum Foreshore

Source: Mott MacDonald (Brisbane Office), photos taken in August 2020

The user should photograph and maintain a record of all the information gathered during the site audit, so this can be referred to at a later point.

The New South Wales Pedestrian and Access Mobility Planning (PAMP) process provides guidance on how to identify walking routes and how to complete a site audit of those walking routes to confirm they are safe for people walking. The user should refer to the PAMP for further guidance on completing a site audit. At the time of publication, the PAMP is approved for use in Queensland, as per the _Traffic and Road Use Management_ (TRUM) manual, Volume 1 Part 4 _Network Management_.

The user could also refer to the Queensland Walkability Improvement Tool, which outlines a methodology to determine whether an area or a route is walkable for people of all ages and abilities.

If the audit identifies the need to update cycle or motorist signage, the relevant asset owner should be contacted. During this process, there may be opportunities to remove signs that are not needed or to consolidate information shown on multiple signs onto one sign being developed for the wayfinding system.

If a lack of safe walking infrastructure is identified, the user should contact the relevant team or department for this to be addressed. The audit may identify walking routes that cross areas owned or managed by different authorities or organisations (public and private). Local governments cannot undertake works within private property or areas managed by other authorities; therefore, these stakeholders should be engaged as part of the planning process so signage remains consistent throughout the area.

If it is expected that walkers will use the wayfinding signs in the hours of darkness, a site visit should also be completed during these times to record ambient lighting levels. Lighting requirements are set out in the _Road Planning and Design Manual_ Volume 6 _Lighting._

6.5   Step 5: Identify confirmation and decision points

Wayfinding should provide information to walkers at all key confirmation or decision points throughout their journeys; confirmation and decision points need to be identified to know where to locate wayfinding signage.

- Confirmation points are locations where walkers may hesitate and require reassurance that they are still going in the right direction or that they have arrived at their destination; for example, confirmation points may be needed on long stretches of footpath with no intersections, or upon arrival at an origin / destination focal point.

- Decision points are locations where a walker must decide which way to go; for example, at intersections or upon leaving an origin / destination focal point.

The confirmation and decision points should be identified on the walking routes shown on the focal point map.

6.6   Step 6: Identify which signs to use

The signage family should include a range of signs, including map-based signs and fingerposts. A sign from the signage family should be selected for each confirmation and decision point, based on the amount of information to be communicated to people walking. The following elements should be considered when selecting the type of sign that is required:

- the complexity of the route that a walker will take – if walkers need to take multiple turns or there are multiple routes that they could use to reach a destination, a map-based sign may be more appropriate

- the visibility of a destination from a walker's location – if walkers cannot see the destination, a map-based sign should be used; if they can see the destination, then a fingerpost can be used, which would also be more cost-effective

- the number of focal points along a walking route – if there are several focal points within a walkable distance, a map-based sign may be a more effective way to communicate to walkers where the focal points are in relation to each other

- the amount of change in the surrounding environment – in locations where change or development is planned, it may be more appropriate to use fingerpost signs which are more cost-effective to implement and replace in the future, once the development has been completed, and

- the presence of appropriate wayfinding signage at confirmation or decision points – if wayfinding signage already exists at a confirmation or decision point, is aligned to the 'Five Cs' and includes the required focal points, it may not be necessary to provide additional signage.

6.7   Step 7: Identify which destinations to sign to

To determine the destinations which should be included in each of the signs, a two-step process is undertaken which is repeated for each sign, one after the other.

6.7.1   Step 7a: Identify destinations within an acceptable walking distance

As discussed in Section 3, people are typically willing to walk for up to 15 minutes; thus, this is the 'acceptable walking distance' in best practice wayfinding systems. It is also noted that climate can affect walking distance, particularly in Queensland and, so, local conditions should be considered.

If the objective of the wayfinding signage is to encourage people to walk longer distances, it may be appropriate to include destinations that are more than a 15-minute walk on the edge of the 15-minute walk map. Caution should be taken when signing to these destinations, however, as they can be difficult for people with disabilities to access by walking.

A 15-minute walk circle should be applied to each sign location to determine which focal points would be appropriate to include.

Note: The 15-minute walk circle indicates a straight line, 'as the crow flies' distance. It is, therefore, important to assess whether locations are actually within a 15-minute walk when following the walking routes identified in Step 4. This may identify focal points which should not be included as they are beyond this distance.

6.7.2 Step 7b: Select appropriate destinations and features for each sign

When selecting the focal points to include on each sign, it is important to consider the function and legibility of the environment and apply the concept of progressive disclosure. The signage type affects the focal points which are appropriate to include, as different signs are designed to include different amounts of information. This is described following and shown in Figure 6.7.2.

- Fingerposts:

  - should only include focal points which are easily legible from that location; for example, they are within a direct line of sight or along a direct pathway with only a single turn to reach the destination

    Note: A maximum number of destinations and features to be shown on fingerposts is not included in the Guideline; however, people can only retain a limited amount of information in their short-term memories and including too many features on the fingerposts can create unnecessary signage clutter.

  - should include features on a route that could affect whether the route is accessible for people with disabilities, such as whether there are lifts or stairs along the route – this information should be communicated using symbols, and

  - should demonstrate the concept of progressive disclosure to only provide the information that walkers need at that location to complete the next step in their journeys; for example, fingerposts that direct walkers to a town centre should not include information about specific focal points within the town centre until they reach the edge of the town centre.

- Map-based signage:

  - is designed to provide more detailed information about the surrounding environment and focal points within an acceptable walking distance, and may include some focal points (not necessarily all, depending on the complexity of the environment) within an acceptable walking distance in both the directional and informational content of the sign – this will include both origins / destinations and landmarks, and

  - may include amenities such as toilets and water fountains; however, this information should be kept up-to-date to avoid walkers being directed to amenities that have been decommissioned.

Figure 6.7.2 – Example of a fingerpost and map-based sign from Toronto illustrating the different amount of information provided
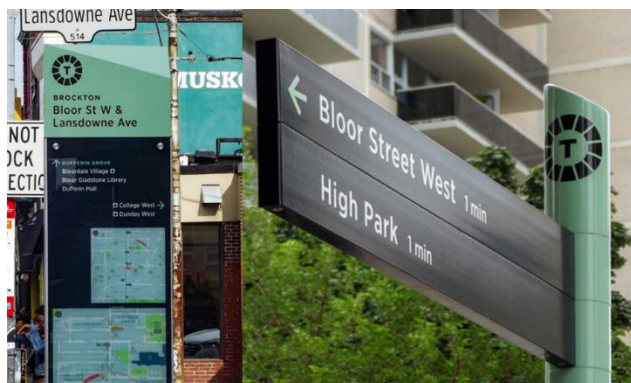
Source: Steer Group.

6.8 Step 8: Produce a signage placement plan and a content schedule

A signage placement plan shows where each sign will be installed in the street environment. Marked-up site photos, diagrams or detailed site maps could be used. The plan should be accompanied by a content schedule that documents the information to be shown on each sign.

6.8.1 Step 8a: Signage placement plan

The placement of signage will depend on the surrounding environment. All signage should be placed in a location that is easily visible and accessible to people walking. Totems and trail markers are double-sided and should be located where walkers can read both sides. Finger posts may also be double-sided if walkers will be approaching from multiple directions.

The following principles should guide the location of signage.

- Place signage at all entry and exit points of the key origin and destinations shown on the focal point map (see Figure 6.8.1(a)).

- Always ensure directional signage is visible and easily accessible from all directions from which people walking may approach. If this is not possible, consider a different location or increase signage provision.

- Place totems at right angles to walking paths.

- Place signage in a location which minimises clutter to avoid unnecessarily constraining the movement of walkers. This may include using poles with existing signage on them or other street furniture such as lampposts.

Note: Wayfinding fingerpost signage should not be located on the same pole as regulatory or warning signs aimed at motorists.

- The scale and form of the street should inform how signage is located at key nodes and intersections (see Figure 6.8.1(b) for examples).

- Place totems and signage in a location that does not obstruct visibility for any road user; for example, signs should be positioned so that they do not affect the ability of motorists or cyclists to see walkers at pedestrian crossings.

Figure 6.8.1 – Example of signage placement outside a transport centre
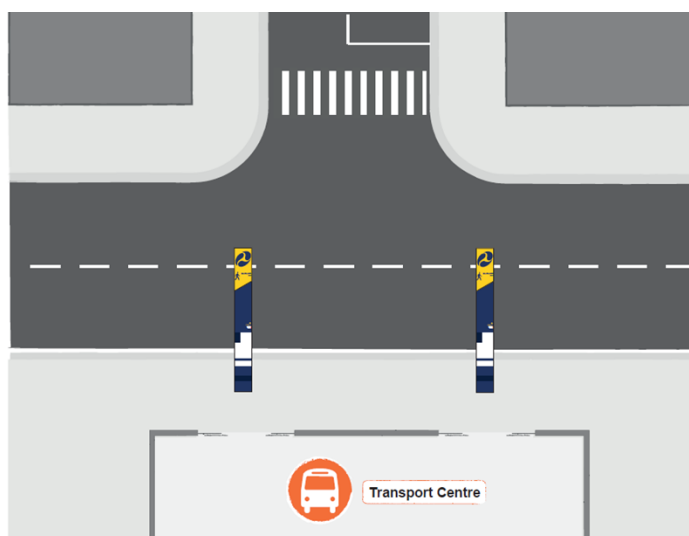
Figure 6.8.1(b) – Example of signage placement at intersections
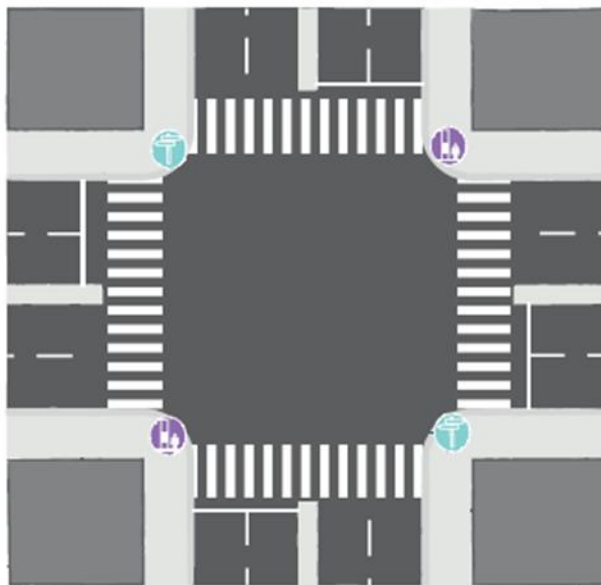
Large intersection
Signage should be placed on all corners
of the intersection to make it as easy to
see and access as possible.
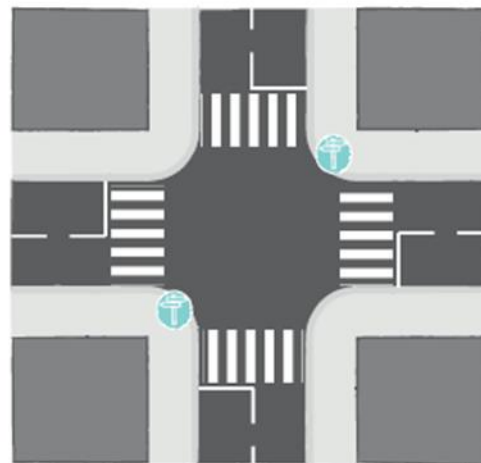
Smaller intersection
It may be possible to use less signage
at smaller intersections. Signage is
likely to be more easily visible from
each corner.

Fingerpost   Totem   Tree

Missing infrastructure
Signage should only be located where
there is infrastructure that enables
people to safely access it.

Lack of space
Signage should be placed in locations
where it is not blocked by existing
infrastructure, such as trees, other
signage, traffic lights.

> Sign clutter can create an uncomfortable walking environment and cause confusion for people using the footpath.
>
> Figure 6.8.1(c) shows several signs that are installed on a cycleway. These signs are located close together and there may be opportunities to consolidate the number of signs or locate signs on the same pole to reduce clutter.

Figure 6.8.1(c) – Duplicate signage schemes in a single location

Source: Mott MacDonald (Brisbane Office).

6.8.2   Step 8b: Produce a content schedule

The content schedule is important as it will be used to inform the installation of the wayfinding signage and be used for record management and auditing of the signs. It can either be incorporated into a Geographic Information System (GIS) or kept as a separate document.

The purpose of the content schedule is to provide a clear record of the information that has been generated through the development of the wayfinding system. The content schedule can also be referred to at a later stage, such as to undertake a post-installation audit to confirm the correct signage is installed or to help identify if information on the signs needs to be updated.

The content schedule should include:

- sign number
- signage placement plan reference number
- location description
- sign type, and
- sign content.

6.8.3 Step 8c: Approval of the signage placement plan and content schedule

Many local governments will have a sign approval process before authorising signs to be manufactured and installed. The relevant approval process should be followed and may involve a registered landscape architect.

6.9 Step 9: Prepare for installation

Preparing for installation includes the production of construction drawings, development of mapping elements for the signs and engaging a manufacturer and contractor for installation. The user should seek professional input for this where required.

The user should carefully select signage contractors when manufacturing and installing signs. When manufacturing a new set of wayfinding signs for the first time, it may be necessary to produce a sample sign first (prior to manufacturing a full suite of signs across a large area). This will allow the user to confirm that the signs are of a good quality and will achieve the wayfinding objectives sought.

6.9.1 Materials to use for the signs

Refer to Section 8 for the consideration of materials in relation to maintenance.

6.9.2 Post-installation audit

Once signage has been installed, a post-installation audit should be completed to confirm that the signs have been installed correctly. The post-installation audit should check:

- all signs are oriented in the correct direction

- all signs are easily visible to people walking but do not obstruct visibility for other road users

- all signs are installed so people with a disability can access them

- all signs contain the correct information, and

- fingerpost blades are mounted in the correct order.

Any mistakes should be rectified immediately.

7 Additional guidance on non-wayfinding signage

As discussed in Section 2.2, there is limited existing guidance in Queensland or elsewhere in Australia on the design of interpretative signage to convey a historical or cultural context. There is also limited guidance on the design of pavement markings to convey behaviour to walkers. This section provides additional guidance so non-wayfinding signage aligns to best practice. The user should refer to documents referenced in Section 2 for guidance on non-wayfinding signage for different purposes.

7.1 Interpretive signage

Interpretive signage can be used to convey the historical or cultural significance of a location. It can be an effective tool to support placemaking and encourage greater interaction between walkers and the place (see Figure 7.1). By providing information about the historical or cultural context, interpretive signs can invite walkers to spend a greater amount of time in the space and enhance their understanding of it. For further guidance, refer to the *QDesign Manual*.

Figure 7.1 – Interpretive sign installed at Queensland University of Technology Gardens Point Ferry Terminal, Brisbane
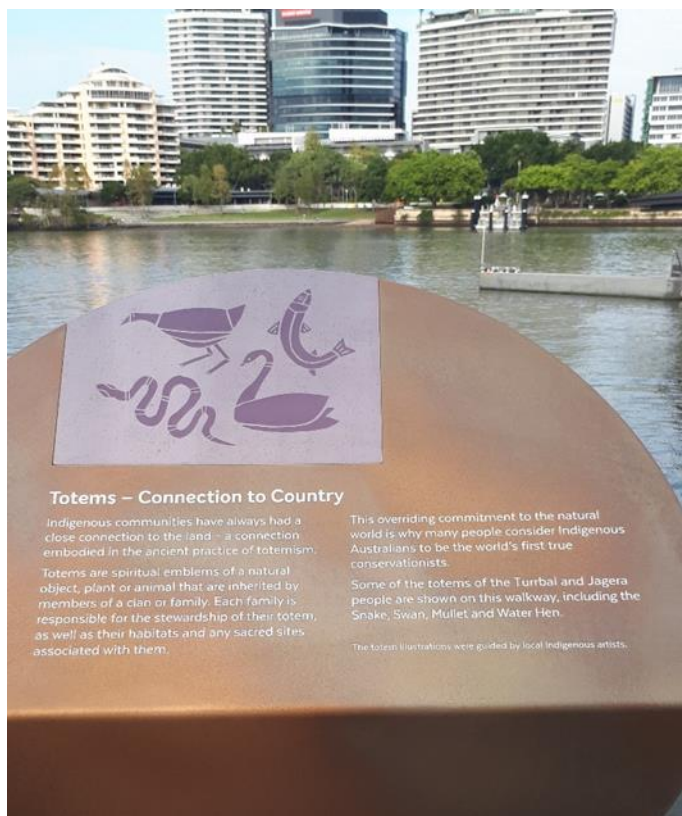
Source: Mott MacDonald (Brisbane Office).

The key principles outlined in Section 4 should be used to guide the development of interpretive signs.

> The concept of Movement and Place is considered in Austroads' *Guide to Traffic Management Part 4 Network Management Strategies.* It is referenced as one way in which urban environments can be designed to be more reflective and accommodating of all road users and their needs. This concept (also known as 'Link and Place') is being used increasingly to determine the function of streets so the design accommodates both the Movement function (travelling through and saving time) and the Place function (travelling to and spending time).
>
> Wayfinding supports the Movement function of streets in providing navigation. Interpretative signage can be used to support the Place function of streets by communicating a unique identity and a historical or cultural significance.

7.2   Pavement markings

Pavement markings can be used to communicate behavioural information to walkers without creating additional clutter or distraction from other signage. An example is shown in Figure 7 2.

Figure 7.2 – Social distancing pavement marker

Source: Reuters.

There are several considerations in the design and implementation of pavement markings for walkers. These include:

- using a skid-resistant material for the safety of walkers in all climate conditions

- maintaining regularly; a pavement marking which is worn may not be readable, and

- ensuring they only contain a limited amount of information.

8   Maintenance

Considerations for maintenance are discussed in this section.

Regular maintenance ensures the physical condition of signs is at an acceptable standard and the information displayed on them is readable and current. A regularly maintained sign system can also deter vandalism.

Existing asset maintenance systems should be used where available.

8.1   Physical assets

The materials used for signs should be suitable for the climatic conditions to reduce the amount of physical maintenance required. This may include materials which are resistant to high temperatures, strong sunlight or corrosion.

Sign materials should not be retroreflective. Pedestrian wayfinding signs are not designed or located for drivers' visibility but, in dark lighting conditions, the headlights of a vehicle may catch a retroreflective pedestrian sign and create driver distraction.

External lighting fixtures should not be incorporated onto wayfinding signage. This can increase the cost of manufacturing the signs. It also requires the sign to be connected to a power source which can be an additional maintenance / operational cost.

Pedestrian wayfinding signs should be installed where there is enough ambient lighting so walkers can see clearly the information contained on the sign (refer to Section 6.4).

To reduce damage from vandalism, anti-graffiti coatings should be applied to all signage. Anti-rotational fittings or fixing screws may be required for the fingerposts (including the blades) to prevent people from removing or twisting them to point in the wrong direction.

Providing a protective metal footing to signage will help protect signs from wear and tear associated with the maintenance of their surroundings, such as from street cleaners or lawn mowers.

> Section 4.4.8 of Austroads' *Guide to Road Design Part 6: Roadside Design, Safety and Barriers* provides guidance on the use of frangible bases for furniture or large signs (such as a totem). Frangible bases should break upon impact with a vehicle, to reduce the impact of an off-road collision for the occupants of the vehicle. Refer to *Guide to Road Design Part 6: Roadside Design, Safety and Barriers* for further guidance.

8.2   Information content

Information that is out of date can be misleading and confusing to walkers and disorientate them. It can create distrust in the information, which can discourage walking. Checking content information regularly will reduce the likelihood of this occurring.

An accurate record of the information contained on each sign should be maintained. The content schedule can assist with this so the focal point map is kept up-to-date.

Each review should consider the following:

- changes to naming of destinations
- changes to walking infrastructure that affect walking routes, and
- changes to focal points or landmarks, such as new developments.

The priority languages within an area may change over time as the demographics of an area change or as a response to an increase in tourism. During the review, the user should confirm that the language(s) displayed on the sign are appropriate and should consider if additional languages need to be included (or if existing languages could be removed).

A review of sign content should be completed annually. In locations where there is a record of high levels of vandalism or change, it may be necessary to review signage more frequently.

For easy updating of information and to reduce costs, signage should be modular in construction, so panels on totems or blades on fingerposts can be replaced as required. This avoids the need to replace entire signs.

8.2.1   Maintaining map-based signage information

There are two options for managing mapping within signage.

- Option 1: Plan-based systems, where a plan is redrawn each time it needs updating, and
- Option 2: GIS database, which enables quick updating of maps.

Appendices

Appendix A – Case study

A fictional case study is included to demonstrate the application of the steps in delivering wayfinding signage as outlined in Section 6. It follows the process outlined in Figure 6.

A.1.   Step 1: Get started

Wayfinding signage for walkers is being implemented in the suburb of Jackman as part of a wider project to encourage more people to walk. The area has several narrow footpaths throughout, which discourage people from walking as footpaths can become congested, particularly near the shopping centre and transport centre. The project aims to improve the physical infrastructure to make walking more attractive and enjoyable and includes public realm improvements such as the widening and replacement of footpaths and the provision of street furniture. Having completed the public realm improvements, the next phase of the project aims to develop a wayfinding system which makes the area easier to navigate, encouraging people to walk more between key destinations, and encourage visitors to explore key attractions on foot.

A.2.   Step 2: Select an area

The area defined by the project is illustrated in Figure A.2(a).

Figure A.2(a). – Extent of the area selected for wayfinding

A desktop review confirmed safe walking infrastructure is in place, so wayfinding is appropriate. It identified a signed cycleway running north to south, through the identified area, but no existing pedestrian wayfinding. Table A.2 documents the other findings from the desktop review.

Table A.2. – Findings from desktop review

Element reviewed	Finding
Destinations of interest to walkers	Several focal points within a walkable distance were noted within the area.
Permanence of the walking environment	The walking improvements project has resulted in significant upgrades to the walking network, particularly along key movement corridors. There are no further planned upgrades (either led by Transport and Main Roads, local government or a private developer) that would have a significant effect on the surrounding area.

| Element reviewed	Finding
Legibility of the walking network	The area follows a grid layout with a main east–west street through the centre. This grid layout improves the legibility of the area, supporting wayfinding. The coastline provides a strong landmark to aid navigation.
Presence of walkers unfamiliar with area	Land use of the area is predominantly residential; however, local knowledge identified many visitors to the beach and National Park.
Existing wayfinding signage	There is no pedestrian wayfinding signage present. There is cycle wayfinding signage at one location, along the north–south cycle route (see Figure A.2(b)).
Infrastructure	The footpaths, pedestrian crossings and signalised crossing provide a safe walking environment for pedestrians. There is an existing cycle route running north–south through and beyond the area (see Figure A.2(b)).

Figure A.2(b) – Identified cycle route
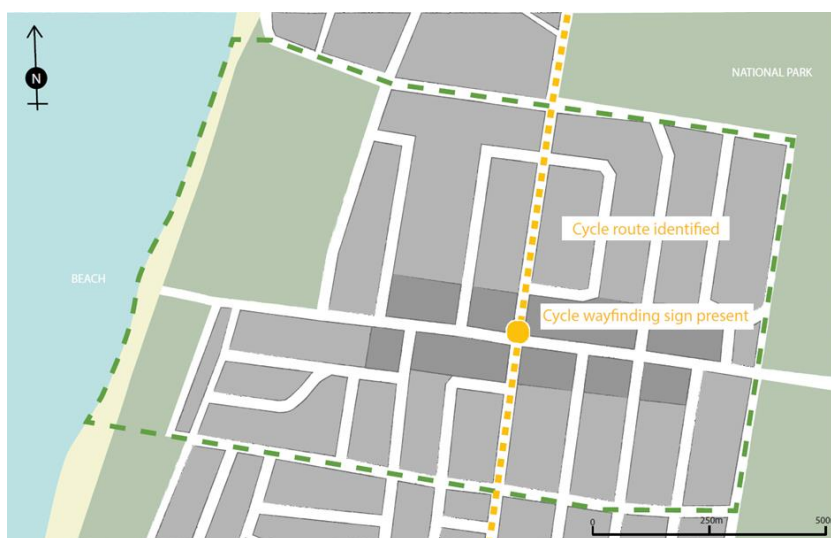
A.2.1   Contextualising place hierarchy

The hierarchy of place used should be appropriate to the scale of the environment for which wayfinding is being provided. In this instance, wayfinding is being provided to a single suburb (Jackman). As such, a three-tier place hierarchy is not required as, if used, all signs would indicate the same suburb at the highest level. Instead, a two-tier hierarchy has been selected (see Figure A.2.1). This uses four 'neighbourhoods' identified through stakeholder engagement (Jackman Beach, North Jackman, South Jackman, Jackman Precinct), and several 'named places' within these.

Figure A.2.1 – Place hierarchy used
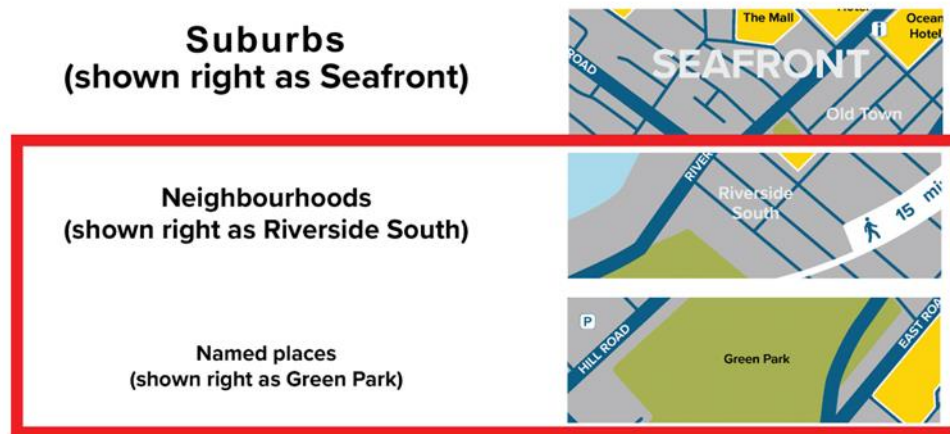
A.3.   Step 3: Identify focal points

Jackman has a high number of visitors who are likely to be unfamiliar with the area; signage should be developed to accommodate their needs.

A desktop review and stakeholder engagement identified several origins and destinations within the area: the hospital, transport centre, shopping centre, beach, National Park, multi-storey car park and the clock tower (as a landmark). The desktop review also considered focal points identified in existing cycle signage. This confirmed the National Park as a focal point; the additional focal points provided on the cycle wayfinding signage were too far away to be relevant for walkers (see Figure A.3).

Figure A.3 – Focal point map

A.4   Step 4: Identify and audit walking routes

To define the routes between origins and destinations, the connectivity and legibility of the environment was carefully considered. A desktop review identified walking routes between focal points (see Figure A.4(a)). The desktop review focused on identifying the most direct routes and, where possible, aligning these to the corridors recently been upgraded as part of the public realm project.

Figure A.4(a) – Walking routes identified between focal points

A site audit was undertaken, using the Pedestrian Access and Mobility Planning (PAMP) process, which identified predominant east–west and north–south walking flows in the area and confirmed sufficient infrastructure along each of the walking routes to support safe walking. The walking routes identified overlap with an existing signed cycle route (see Figure A.4(b)).

Figure A.4(b) – Overlap of walking and cycle routes
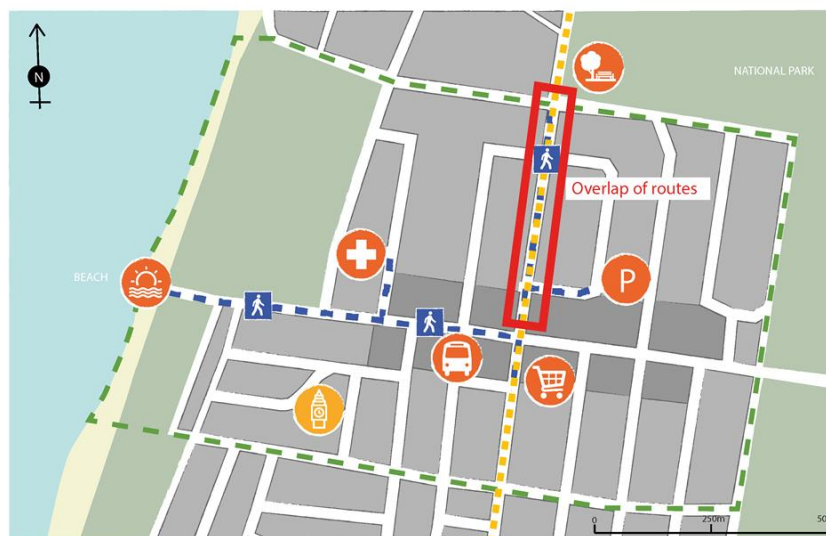
A.5. Step 5: Identify confirmation and decision points

Two confirmation and three decision points were identified on the walking routes (see Figure A.5) where walkers needed reassurance they were going in the right direction and needed to make a route decision. Origins and destinations are also confirmation and decision points as they require walkers to decide on their route or confirm that they have arrived at their destination.

Note: Decision points 2 and 3 and confirmation point 2 are located on the walking route where it overlaps with the existing signed cycle route.

Figure A.5 – Decision and confirmation points identified

A.6   Step 6: Identify which signs to use

The sign to use at each confirmation and decision point (as well as at origin and destinations) was determined, considering:

- the complexity of the route that a walker will take

- the visibility of a destination from a walker's location

- the number of focal points along a walking route

- the likelihood of change in the surrounding environment, and

- the presence of appropriate wayfinding signage at confirmation or decision points.

This resulted in four totems and seven finger post signs being selected (see Figure A.6).

Figure A.6 – Sign type selected for each confirmation and decision point
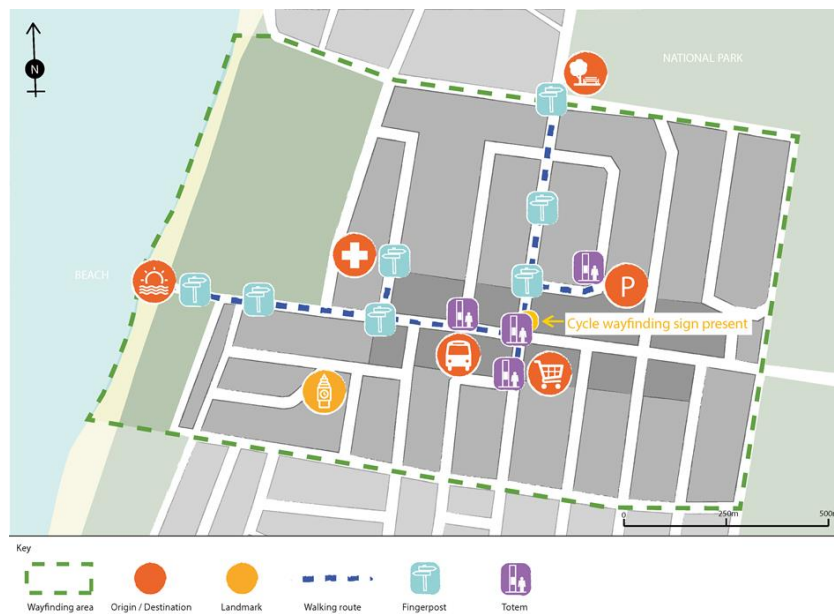
While an existing cycle sign was present at decision point 2, this only included directions to the National Park focal point, not the multi-storey carpark, shopping centre or any of the focal points to the west of the cycleway; therefore, pedestrian wayfinding signs were needed to include this additional information.

A fingerpost was also required at confirmation point 2, along the overlapping walking and cycle routes to reassure walkers they were on the correct route to the National Park.

A.7.   Step 7: Identify which destinations to sign to

The following steps were undertaken for each sign location.

A.7.1   Step 7a: Identify destinations within an acceptable walking distance

A 15-minute walk circle was applied to each sign to identify the focal points within an acceptable walking distance. The actual walking distance along the defined walking routes was also checked to confirm their inclusion.

Taking the beach as an example (see Figure A.7.1), all focal points were initially identified as being within an acceptable walking distance (15-minute walk); however, upon closer investigation, the National Park was found to be an 18-minute walk from the beach, using the defined walking routes and, therefore, should not be included on this fingerpost sign.

Figure A.7.1 – Destinations initially identified as being within a 15-minute walk of the beach
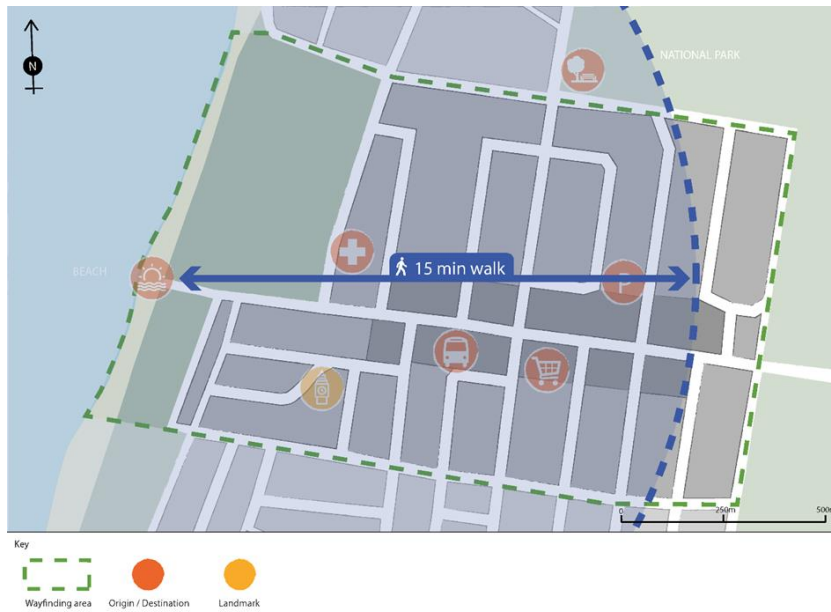
A.7.2 Step 7b: Select appropriate destinations for each sign

Once the focal points within an appropriate walking distance were identified, the most appropriate focal points to include on each sign were confirmed, based on whether the sign is a confirmation point or decision point (see Figure A.7.2).

Figure A.7.2 – Example focal points for inclusion in each sign
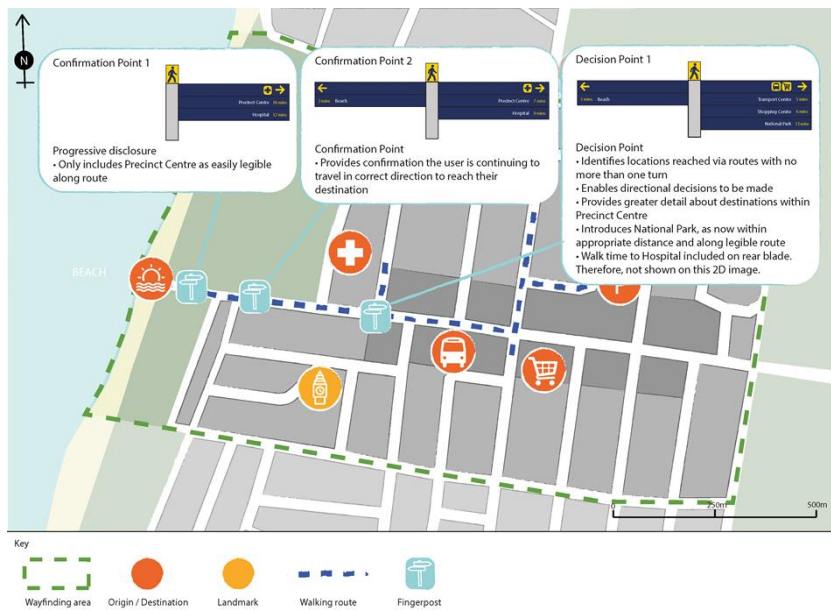
A.8 Step 8: Produce a signage placement plan and a content schedule

Building upon the information generated in Steps 1–7, a signage placement plan and content schedule were produced to inform the implementation of the wayfinding signage.
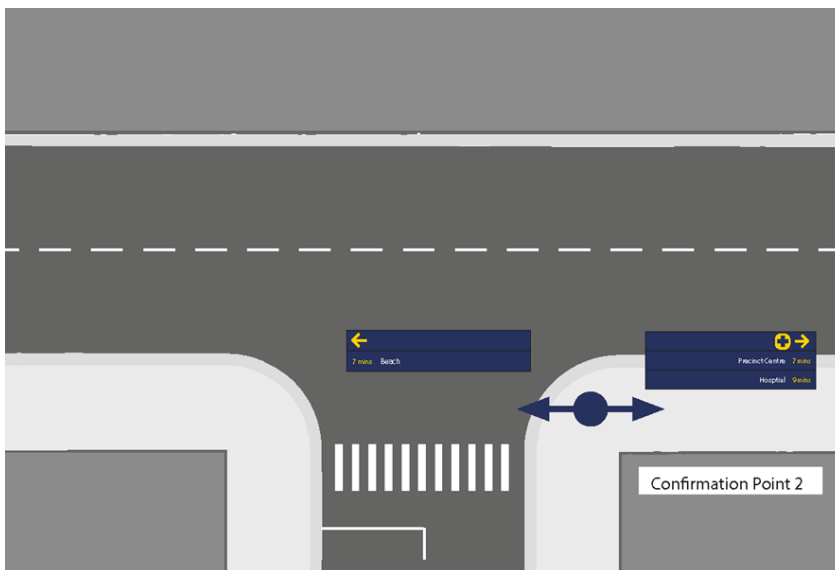
A.8.1 Step 8a: Signage placement plan

The exact location of each sign in the street environment was determined for increased visibility and accessibility of signage. Locations were also selected to reduce clutter and to avoid creating an

obstruction to walkers. At destinations such as the transport centre, where there are multiple entry and exit points, signage was placed at all entry and exit points, perpendicular to the main flow of walkers. Figures A.8.1(a) and A.8.1(b) provide examples of signage placement plans.

Figure A.8.1(a) – Signage placement plan for transport totems located outside the transport centre

Figure A.8.1(b) – Signage placement plan for fingerpost located at confirmation point 2
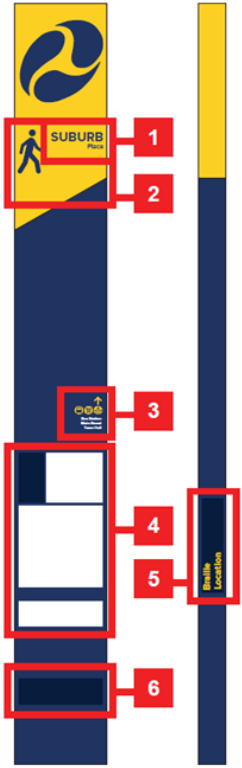
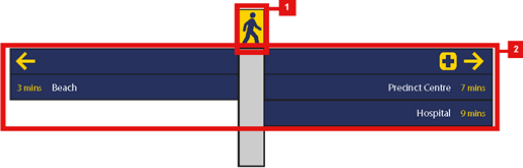### A.8.2   Step 8b: Content schedule

A content schedule was created to support the signage placement plan. The content schedule includes:

- sign number

- signage placement plan reference number

- location description

- sign type, and

- sign content.

This is shown in Table A.8.2 for the signage placement plan examples illustrated in figures A.8.1(a) and A.8.1(b).

Table A.8.2 – Example content schedule

Sign no.	Plan ref.	Location description	Sign type	Sign content				
1	1	Transport Centre exit to Main St	Transport Totem		**Both sides**			
					1.	Locational	1st line	JACKMAN PRECINCT
							2nd line	Transport Centre
					2.	Identifier	Pedestrian icon	
					4.	Map-based information	Includes landmarks Includes key named roads, supporting infrastructure and facilities through recognised symbols (parking, public toilets, pedestrian crossings, bike parking) 5-minute walking area - shopping centre - hospital – hospital symbol	15-minute walking area - multi-storey car park – parking symbol - National Park - beach Includes walk times to key destinations Includes A–Z street finder for all named streets in 5-minute walk map
					6	Logos	Includes logo for local government implementing the wayfinding	
					Panel A			
					3.	Directional	← Beach (10 mins) Hospital (3 mins)	→ Shopping centre (4 mins) Multi-storey car park (7 mins) National Park (10 mins)
					5.	Accessibility	Braille strip with "Transport Centre" on left-hand side of Panel A	
					Panel B			
					3.	Directional	← Shopping centre (4 mins) Multi-storey car park (7 mins) National Park (10 mins)	→ Beach (10 mins) Hospital (3 mins)
2	2	Southern side of Main St, east of rear beach road T-intersection	Fingerpost		1.	Identifier	Pedestrian icon	
					2.	Directional	Blade 1	← Beach (3 mins)
							Blade 2	→ Precinct centre (7 mins) Hospital (9 mins)

A.8.3 Step 8c: Approval of the signage

In Jackman, all signs aimed at walkers need to be approved by the Chief Engineer and a registered landscape architect. This process was followed for the wayfinding signage.

A.9 Step 9: Prepare for installation

Once the signage placement plan and content schedule have been created, construction drawings will be produced, mapping developed, and a manufacturer and contractor engaged for installation.