

KNOX MOBILITY STUDY TOOLKIT

Best practice design & construction
of footpaths and shared paths for
people using mobility equipment

Introduction

The purpose of this document is to help to improve the quality of the footpaths and shared path networks within Knox for pedestrians using mobility equipment.

This toolkit identifies the typical issues and situations where improvements could be made whilst also offering advice for opportunities to better improve the street environment for people using mobility equipment.

There are a number of excellent reports which highlight strategies for improving the Knox City Centre pedestrian environment, however this study is specific to the needs and requirements of pedestrians using mobility equipment.

References

Key reports which should be read in conjunction with this document are:

- The Knox City Council Mobility Study by Symplan.
- The Australian Standards and in particular: AS 1428 - Design for Access & Mobility - Parts 1 & 2.

Other useful references

- The Knox Pedestrian Plan prepared by David Lock Associates in association with PBAI for Knox City Council September 2005.
- Pedestrian kerb ramps and footpaths - construction check-list - by David Zilm


Notes

This document is not able to be updated each time a new Australian Standard is published. It is intended that the most up-to-date version of the standards should be used.


Australian Standards are only mandatory within the property line, but are recommended for public footpaths and areas. It is the intent that wherever possible, paths meet the relevant Australian Standards and the Disability Discrimination Act (DDA).

This toolkit was prepared by: ASPECT Studios, Symplan, Scope and Planisphere.



Path Design

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>1. Path width and levels</p>	<p>A 1.2m path is not wide enough for bikes, mobility scooters and pedestrians to share.</p>	<p>Upgrading all paths to wider than 1.2 m may not deliver sufficient cost/benefits. It is recommended that a method of identifying and prioritising paths be developed.</p> <p>Factors that would require a wider path (1.5 or 1.8 m):</p> <p>High traffic areas.</p> <ul style="list-style-type: none"> The paths that do not have an adjacent level surface which is at least 600mm wide on at least one side to allow a pedestrian or bike rider to leave the path to pass another person. Areas where there is not a clear view of the path ahead. Where possible, paths should be level with an even gradient. Where gradients are steeper than 1:20 in high pedestrian areas with high traffic, consider installation of a ramp in compliance with Australian Standards. The crossfall on paths should be sufficient to eliminate pooling of water but not greater than 1:33 for bituminous surfaces and 1:40 for other surfaces. 	<p>AS1428 parts 1&2.</p> <p>AS1428.2:1992 Clause 6.4 & 6.5</p> <p>AS1428.1:2009 Clause 10.2 for walkways steeper than 1:33</p> <p>AS1428.1:2009 Clause 10</p> <p>AS1428.1:2009 Clause 10.1</p>		<p>Identify and prioritise paths to be developed</p> <p>Review assessment criteria for footpath/shared path priority list</p> <p>Ensure that consideration for mobility users is given for new developments or redevelopment projects</p>	<p>Knox City Council (KCC) Transport and Traffic</p> <p>KCC Project Delivery</p> <p>KCC Construction Department</p> <p>KCC Planning Department</p> <p>Private Developers and Consultants</p>

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<p>2. Path edge</p>	<p>Deeply recessed planting beds adjacent to path edges can be a hazard because wheels of chairs and scooters can easily get stuck in plant beds.</p> <p>Roll over kerbs are difficult to see and can be a trip hazard.</p>	<ul style="list-style-type: none"> Planting beds should be constructed and maintained to be level with the path surface. Any upstand should be a minimum of 65mm but preferably 150mm or greater and expressed in a continuous manner to avoid it from being a trip hazard. Upstands must not be located where transverse pedestrian traffic occurs as they could become a tripping hazard. Rollover kerbs should not be used in pedestrian areas as the change in profile is difficult to judge for members of the general community as well as a serious hazard to all people with mobility issues. 			<ul style="list-style-type: none"> Address maintenance issues Arrange for regular checks for maintenance Provide clear construction specifications to contractors Public and/or officers to report immediate maintenance requirements 	<ul style="list-style-type: none"> KCC Works Department KCC Open Space and Landscape Design KCC Place Management Private Contractors, Developers & Owners General Public
<p>3. Kerb Ramps</p>	<p>Narrow, difficult to see, poorly aligned or uneven kerb ramps present a hazard. Steep or uneven gradients leading up to and on the kerb ramp can present difficulties for people who are mobility impaired.</p> <p>The lower edge of the ramp is not perpendicular to the direction of travel.</p>	<ul style="list-style-type: none"> The kerb ramps and the road surface at the crossing place must provide a smooth, continuous surface. Cobblestones and other rough decorative pavements should not be used on accessible paths of travel and service pits should not be located at crossings where possible. Although having a clearly demarcated kerb ramp is preferable, painting the kerb ramps may be undesirable to Councils and could introduce a slip hazard. The standards specify that the base of kerb ramps are flush with the road surface and are perpendicular to the direction of travel. Kerb ramp to be the full width of the marked road crossing. 	<p>AS1428.1:2009 Clause 10.7</p>		<ul style="list-style-type: none"> Reassess existing kerb ramps and standard design Consider mobility access in design Identify places requiring upgrade 	<ul style="list-style-type: none"> Australian Standards KCC Asset Management KCC Open Space and Landscape Design KCC Place Management KCC Construction Department KCC Works Department KCC Transport and Traffic

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<p>4. Kerb design</p>	<p>Kerbs, edges and vehicle surfaces with little colour or texture contrast are difficult to see.</p> <p>Kerbs with an unusually high upstand represent a hazard.</p>	<ul style="list-style-type: none"> A contrast of colour introduced through use of material (eg asphalt path & road adjacent to a concrete gutter and kerb ramp) is useful to indicate the kerb edge and help with navigation and wayfinding. Kerbs to comply with Australian Standards including maximum gradient 1:8, length 1520mm, splayed sides, the top and bottom of the ramp to be aligned with the direction of travel. Contrast in colour between the kerb & footpath and the kerb & road enables people to clearly identify path edges. 	<p>AS1428.1:2009 Clause 10.7</p>		<p>Consider mobility access in design and use of materials</p>	<p>KCC Planning Department</p> <p>KCC Transport and Traffic Department</p> <p>KCC Project Delivery</p> <p>KCC Place Management</p> <p>VicRoads</p> <p>Private developers</p> <p>Australian Standards</p>
<p>5. Footpaths in carparks</p>	<p>Footpaths can become inaccessible islands for people with mobility issues when no identified pedestrian path of travel is provided through places like car park. At Knox City car park, there are situations where ramps are not provided and the only option is to risk crossing a high kerb or returning to the point of origin.</p>	<ul style="list-style-type: none"> An accessible path of travel should be provided from adjacent public transport locations and accessible car spaces to the building entrances and other important spaces/facilities at the site. Kerb ramps should be included, where required, to accommodate changes in level. Rollover kerbs should not be included along these paths of travel. Where a clear path of travel is not obvious to pedestrians, it should be indicated by painted lines through the car park from the accessible car spaces and public transport stops to the entrances. Use raised pavements or landscaping features to further identify paths of travel 			<p>Review Municipal Strategic Statement in Planning Scheme and ensure that appropriate mobility access is considered</p> <p>Provide internal training sessions on mobility access and assessing plans and works</p>	<p>Private Developers</p> <p>KCC Planning Department</p> <p>KCC Transport and Traffic</p> <p>KCC Project Delivery</p> <p>KCC Asset Management</p> <p>KCC Construction Department</p> <p>KCC Works Department</p>


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<p>6. Geometry and alignment of paths and 'desire line' paths</p>	<p>Where direct paths have not been provided to link the key destinations, 'goat track' paths will happen. These can become muddy, unsafe and can have a negative visual impact.</p> <p>Long/straight paths which provide no visual interest can be dull and deter users, but overly winding paths can be difficult to negotiate for users in wheelchairs/ scooters.</p>	<ul style="list-style-type: none"> • Direct paths should be provided in strategic places. The feasibility of providing paths across all 'desire lines' should be considered. • Secondary paths should be provided to link main paths to public transport stops and taxi stands. • A balance between the two is ideal with gently winding intermissions along lengthy straight routes. 			<p>Where possible, align new paths along existing 'goat tracks' and desire lines</p>	<p>Private Developers KCC Planning Department KCC Transport and Traffic</p>
<p>7. Maintenance</p>	<p>Overgrown and overhanging bushes which impede the visual connectivity of the immediate pathway can become a hazard, especially around crossings. Perception of safety, especially at night can be impeded by unclear sightlines.</p>	<p>Overhanging trees or shrubs should be pruned or removed. New plants should be carefully selected and located and appropriate management plans created. Obstacles such as large signage should be relocated locally where possible.</p>	<p>AS1428.1:2009 Clause 6.2</p>		<p>Advocacy of trimming vegetation on private property overhanging footpaths</p> <p>Awareness of need for accessible streets</p>	<p>KCC Local Laws General Public KCC Maintenance and Bushland KCC Open Space and Landscape Design</p>


Path Surface

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>1. Pit covers and drainage grates</p>	<p>Pit covers located within pedestrian paths and crossings can cause trip hazards and unnecessary level change. Wide holes in grates can be a hazard for mobility impaired people. Walking sticks/ wheelchair wheels can get caught in these.</p>	<ul style="list-style-type: none"> Underground utilities pit covers should be located away from the kerb ramps where possible in any future new or rectification works. Service authorities should ensure the pit lids are correctly aligned after access. Drainage grates within a path of travel are to have holes no greater than 13mm diameter for circular holes OR slotted openings to be no wider than 13mm with the long dimension positioned transverse to the direction of travel OR slotted openings no wider than 8mm. 	<p>AS 1428.1:2009 Clause 7.5</p>		<p>Consider standard grate design for drain upgrades and or new infrastructure works</p>	<p>KCC Works Department KCC Drainage Department KCC Project Delivery</p>
<p>2. Path Surface</p>	<p>Trip hazards caused by leaf litter, weeds, ring holes (old signage post settings where the posts have been removed), cracked and broken paving and raised joints between paving.</p>	<ul style="list-style-type: none"> The height difference between pavers and different surfaces is to be a maximum of 5mm and rounded or bevelled. Repair or replace poor quality paving. Council to review maintenance programme and consider a rapid response team. 	<p>AS1428.1:2009 Clause 7</p>		<p>Review Rapid Response Process Improve General Public Reporting of Location Requiring Works</p>	<p>KCC Works Department KCC Asset Strategy General Public</p>




Path Surface

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<p>3. Tactile indicator - location and condition</p>	<p>If tactile paving is in a poor state of repair, it can become a dangerous roadside trip hazard.</p> <p>If tactile indicators are located on pit covers, they can become a maintenance problem.</p>	<ul style="list-style-type: none"> Tactile indicators should be installed according to the Australian Standards and are the best way of providing information to people with vision impairment. An audit of the existing tactile paving should be carried out and repairs/replacements carried out where necessary. Tactile indicators should not be situated on service pit covers. If they are, service engineers must replace the covers to the original alignment. 	<p>AS1428.4.1:2009</p>		<p>Improve General Public Reporting of Locations Requiring replacement or improvements of TGSIs</p>	<p>General Public Department of Transport KCC Works Department KCC Asset Strategy VicRoads</p>
<p>4. Paving materials</p>	<p>Gravel or loose materials located on sloped paths creates slippery surfaces, which is particularly hazardous for people with restricted mobility or using mobility equipment with wheels.</p> <p>Loose materials, adjacent to paths, which are carried onto the path with water runoff can also cause a hazard.</p>	<ul style="list-style-type: none"> Use path materials which are suitable for the situation and gradient. Ensure the path's gradients directs the potential run-off away from pedestrian crossings and key pedestrian areas. 			<p>Consider needs of people using mobility equipment in selection of paving materials adjacent to footpaths and shared paths</p>	<p>KCC Project Delivery KCC Construction Department</p>

Path Surface

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<p>5. Paving joints</p>	<p>Sharp changes in level between pavings can cause a trip hazard.</p> <p>Uneven paving can make a journey highly uncomfortable by exacerbating pain for people in wheelchairs /mobility scooters.</p>	<ul style="list-style-type: none"> • Strategic location and species selection of trees so root damage is not an issue. Tree root barriers could be used in appropriate situations where this could be a major problem. • Ensure new paths are constructed with flush joints. 	<p>AS1428.1 Clause 7</p>		<p>Report issues to the appropriate authority in a timely manner</p>	<p>KCC Project Delivery KCC Construction Department</p>
<p>6. Holes in paving surface</p>	<p>Wheelchair wheels, mobility frames and walking sticks can all easily get stuck in holes which are greater than 13mm in diameter. These holes can also create trip hazards.</p>	<ul style="list-style-type: none"> • Infill holes over 13mm within the pavement and ensure any hazards are removed and ensure that older service lids are replaced with newer DDA compliant pit covers. • The gap between pavers is to be no wider than 12mm and no deeper than 3-5mm with the edges rounded or bevelled. 	<p>AS1428.1:2009 Clause 7, Figure 6&7.</p>		<p>Report issues to the appropriate authority in a timely manner</p>	<p>General Public KCC Works Department Private Owners</p>


Road Crossings

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>1. Crossings at large vehicle dominated intersections</p>	<p>Vehicle dominated arterial roads often have paths close to the road and the perception of risk is increased. General high speed and noise of traffic creates a sense of vulnerability.</p>	<p>Where possible install pedestrian-friendly road crossings in high-pedestrian demand areas which have the following characteristics:</p> <ul style="list-style-type: none"> • Landscape buffer, • High quality pathways, • Strategically located trees which preserve good sightlines. • Trees placed within root guards (to diminish damage to footpaths), • Development on vacant land which fronts pedestrian paths to ensure passive surveillance, 			<p>Consider comfort and safety of people using mobility issues during design and maintenance of road crossings at intersections with high traffic volumes</p>	<p>VicRoads</p>
<p>2. Smaller crossings</p>		<ul style="list-style-type: none"> • Installed close to desire lines of pedestrians. • For smaller roads within key activity areas, raised crossings could be created with kerb outstands to reduce crossing distance. 	<p>AS1742.10</p>		<p>Identify most convenient and safest crossing points during the planning and design of activity centres</p>	<p>KCC Open Space and Landscape Design KCC Place Management KCC Transport and Traffic Developers Private owners</p>
<p>3. Mid-block crossings</p>	<p>Pedestrians select most convenient but not necessarily safest place to cross the road. Poor visibility for drivers.</p>	<ul style="list-style-type: none"> • Select site close to pedestrian desire lines and where they are highly visible to approaching vehicles. • Install signage to indicate crossing point. 			<p>Identify most convenient and safest crossing points according to location of key activities and uses</p>	<p>VicRoads</p>



Road Crossings

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<p>4. Length of pedestrian lights and control button location</p>	<p>Traffic signals prioritise vehicular movement (short 'green man' time). Buttons located in inaccessible locations.</p>	<ul style="list-style-type: none"> • Pedestrian crossing points with sensor loops in the footpaths to detect wheelchairs and scooters. These trigger a longer "Green man" time for that cycle of traffic lights. It is recommended that these are installed at larger intersections which are known to be used by people who use wheelchairs or scooters. • Ensure level landing spaces are provided adjacent to the control buttons. 	<p>AS1742.10 Manual of uniform traffic control devices.</p>		<p>Advocate for longer crossing times at intersections that carry large volumes of pedestrians</p>	<p>VicRoads</p>
<p>5. Central median pedestrian refuge</p>	<p>The size of the central median strip is not always long enough for a mobility scooter.</p>	<ul style="list-style-type: none"> • A central median strip of 2000mm width (1200 mm is the minimum) will accommodate a wheelchair or scooter, but a median strip of 2400mm width is preferred to allow compliant installation of tactile indicators and greater space between a pedestrian and passing cars. • Pedestrian refuges should be provided where more than four lanes of traffic are to be crossed or at 'signalised crossings where the pedestrian interval is insufficient to guarantee all pedestrians time to cross the full width of the carriageway" • Refuges should be designed to allow clear visibility for both pedestrians and drivers. 	<p>AS1742.10</p>		<p>Ensure that pedestrian refuges align with road crossings and adjoining paths</p>	<p>VicRoads</p>

Road Crossings

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<p>6. Alignment, location of crossings and circulation space</p>	<p>Crossings which are poorly situated (ie. on steep gradients, on blind corners) can be dangerous.</p> <p>'Pinch points' can occur where road edges and crossings meet</p>	<ul style="list-style-type: none"> • Poorly aligned crossings should be straightened where possible to provide clear directional routes and kerb ramps should be aligned to provide a clear and direct straight path of travel. • Crossings should be thoughtfully located in relation to gradients and pedestrian safety. • The kerb ramps and the road surface at the crossing place must provide a smooth, continuous surface. (Please see '7. Kerb Ramps' for more detail). • In some situations, a raised crossing might be necessary to give pedestrians priority and to slow traffic. • Compliant landings should be provided at the top and bottom of the kerb ramps to ensure sufficient manoeuvring space is provided • Road markings indicating the pedestrian crossing should align with the edges of the kerb ramps. 	<p>AS1428.1:2009 Figure 24(A).</p>		<p>Locate road crossings align with key destinations, entrances and exits to shopping centres and adjoining paths</p>	<p>VicRoads KCC Transport & Traffic KCC Construction Department KCC Place Management KCC Open Space and Landscape Design</p>



Path Interface

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>1. Temporary obstruction to the pathway</p>	<p>Obstructions on the footpath such as parked cars (especially overhanging tow bars), trading displays (eg. signage, billboards, retail stalls) café tables and seating can be hazardous and make navigation difficult.</p>	<ul style="list-style-type: none"> A clear unobstructed width of 1200mm should be maintained after an allowance for parked cars, street furniture, signage, etc is made. In shopping centres, a clear 1240mm wide zone immediately in front of the shopfronts is required. Where a strip zone is very busy and there is a possibility of continuous line of café, street furniture and signage, provision could be made for 1500 mm wide passing zones and 2.5m circulation zones near crossing points. Parking for cars and delivery vans should be planned so that the vehicles do not obstruct the clear pathway. 			<p>Raise awareness of the need to ensure that footpaths and shared paths remain clear and clean at all times</p>	<p>Retail Owners and Trader Association Private Landowners KCC Local Laws</p>
<p>2. Barriers in the footpath</p>	<p>Barriers which are in the way of a direct route will discourage pedestrian mobility.</p>	<ul style="list-style-type: none"> Unnecessary barriers within the footpath should be removed. Cars should be discouraged / prevented from parking on or overhanging the footpath. Ensure obstacles located within the footpath have a colour that provides a luminance contrast with the colour of the footpath 			<p>Raise awareness of the need to ensure that there are no barriers in the footpaths and shared paths</p>	<p>KCC Transport and Traffic KCC Local Laws KCC Open Space and Landscape Design KCC Place Management</p>

Path Interface

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<p>3. Sloped walkways / ramps</p>	<p>Older ramps which do not meet DDA regulations often don't have handrails or flat waiting places. Many of these are on private land or on land owned and operated by transport agencies such as VicTrack.</p>	<ul style="list-style-type: none"> Encourage the upgrade of these ramps and advise the land owner of the regulations regarding DDA compliant ramps, steps, handrails etc. 	<p>AS1428.1:2009 Clause 10</p>		<p>Consider the needs of people using mobility equipment in the design and location of sloped walkways and ramps</p>	<p>KCC Project Delivery KCC Place Management KCC Construction Department KCC Planning Department Private Landowners Developers and Contractors</p>
<p>4. Steps</p>	<p>Steps are impossible to navigate for people using wheeled mobility equipment such as scooters, wheelchairs and walking frames.</p>	<ul style="list-style-type: none"> Ensure DDA compliant ramps are provided for alternative point of access where required. Provide handrails, stair nosings on all stairs. Provide tactile indicators on all stairs. 	<p>AS1428.1:2009 Clause 11 AS1428.4.1:2009</p>		<p>Minimise the use of steps at the entrances of new and existing buildings</p>	<p>KCC Place Management KCC Planning Department KCC Project Delivery KCC Construction Department Private Landowners Developers and Contractors</p>



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<p>5. Building entrances - wayfinding</p>	<p>Major destinations entrances are not always clearly visible from afar which makes journey planning difficult.</p>	<ul style="list-style-type: none"> • Paths and landscaping features can be used to help people identify the location of entrances. • Building entrance doors should provide a luminance contrast when compared with the adjacent building walls. 	<p>AS1428.1:2009 Clause 13.1</p>		<p>Consider the needs of people with disabilities in the design of signage</p>	<p>KCC Place Management KCC Open Space and Landscape Design KCC Transport and Traffic Private Landowners Contractors and Developers KCC Planning Department</p>
<p>6. Building entrances - width</p>	<p>Narrow pedestrian entrances can be difficult for people in scooters and wheelchairs to navigate.</p>	<ul style="list-style-type: none"> • Paths leading to key building entrances should be wide, linear or gently curved (not angled) and have clear visibility and sightlines and entrance elements like gateposts and railings should be strategically sited. 			<p>Maximise the width of entrances to existing and new buildings</p>	<p>KCC Planning Department Private Landowners Developers and Contractors</p>



Infrastructure & Amenities

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>1. Seating</p>	<p>There is a lack of good quality seating along the main pedestrian routes and at key destination points.</p> <p>Some seats don't have armrests.</p>	<ul style="list-style-type: none"> • Seating should be located at 60m intervals in areas where people who use mobility equipment are likely to be walking e.g. shopping centres and hubs, in parks and gardens. • Seating should be located so that it is positioned at least 500mm away from the path of travel. This is to ensure the feet of a person seated on the bench does not become a trip hazard for other pedestrians. • Seating should be placed in areas of shade e.g. south of a tree and at least 2.5m from rubbish bins. • It is recommended that some seating should be provided with arms. This is to provide assistance with sitting and standing. All arms should be secure and robust. Where two or more bench seats are provided end to end and are not on the same level arms should be provided where the seat surface is not continuous for safety. 			<p>Ensure that the location of seating maximises the comfort and convenience of people using mobility equipment</p>	<p>KCC Open Space and Landscape Design KCC Place Management KCC Planning Department KCC Parks Department KCC Transport & Traffic</p>
<p>2. Amenity infrastructure (drinking fountains and rubbish / recycle bins)</p>	<p>Lack of amenity infrastructure at key locations.</p>	<ul style="list-style-type: none"> • Amenity infrastructure should be placed near to nodes and 'pause places'. Highly visible but not obstructing circulation. • Fixtures should have a colour that provides a luminance contrast 			<p>Ensure that the location of amenity infrastructure maximises the comfort and convenience of people using mobility equipment</p>	<p>KCC Open Space and Landscape Design KCC Place Management KCC Planning Department Developers and Contractors</p>

Infrastructure & Amenities

Element	Issue	Best Practice	Relevant standards that meet the intent of the Disability Discrimination Act	Best Practice Illustration	Actions	Responsibility
<p>3. Shade and Comfort</p>	<p>Apart from bus/transport shelters, there is a lack of shelter from the sun and rain along key pedestrian routes.</p>	<ul style="list-style-type: none"> • Shelter from the rain and the sun are crucial to pedestrians journeying outdoors. Shelters should be provided where possible at key nodes where people are likely to want to rest. • A series of strategic ‘pause points’ should be created along route between key destination points to allow people to sit in an interesting shady environment, with shade from trees or a shade/rain structure where appropriate. 			<p>Use a range of natural and artificial shade structures along footpaths and shared paths, and in close proximity to seating and other amenity infrastructure</p>	<p>KCC Open Space and Landscape Design KCC Place Management KCC Parks Department</p>
<p>4. Toilets</p>	<p>Lack of provision and information about provision.</p>	<ul style="list-style-type: none"> • Information on local accessible public toilet provision should be provided via leaflets/signage/internet so people can have the confidence to embark on their journey. 			<p>Ensure that toilets are conveniently located and visible</p>	<p>KCC Open Space and Landscape Design KCC Access and Inclusion KCC Media and Communications Department KCC Information Technology KCC Place Management Private Landowners Developers and Contractors</p>

Infrastructure & Amenities

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<p>5. Accessible parking places</p>	<p>Lack of, or provision of poorly designed accessible parking.</p>	<ul style="list-style-type: none"> • Accessible parking should be provided as close as practicable to the building entrances and it must comply with new Australian Standards for parking. 	<p>AS2890.6:2009 – Offstreet parking.</p>		<p>Monitor the use of accessible car parking places to ensure that they are available at all times for people with disabilities</p>	<p>KCC Transport and Traffic Private Landowners KCC Planning Department Developers and Contractors</p>
<p>6. Pre-journey information</p>	<p>Lack of information before and during the journey.</p>	<ul style="list-style-type: none"> • Signage board/map provision at key nodes is important to allow pedestrians to choose their journey. Often elderly people will plan their route based on rest stops and public conveniences and facilities. Therefore information on safe routes and facilities should be accessible. • Information on the internet and leaflets could be a useful way of highlighting easier and safe routes for people with limited mobility. 			<p>Consider the needs of people with disabilities in the design of signage that provides pre-journey information</p>	<p>KCC Open Space and Landscape Design KCC Place Management KCC Media and Communications KCC Information Technology Private Landowners Metlink Information distribution services on the internet</p>

Infrastructure & Amenities

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7. Public phone boxes	<p>Lack of public phones.</p> <p>Located within paths of travel.</p> <p>Located where background noise levels are high.</p>	<ul style="list-style-type: none"> • Provide phones in appropriate locations. • Locate phone booths in areas where background noise levels are minimised. • Located keypads and receivers at accessible heights. 	<p>AS1428.2 Clause 30</p> <p>Accessibility of Payphones – Industry Guideline. G630:2006</p>		<p>Ensure that public phone boxes are conveniently located and visible</p>	<p>Telstra</p> <p>Council</p> <p>Private Landowners</p>
8. Lighting	<p>Lack of street lighting.</p>	<ul style="list-style-type: none"> • Lighting should be provided in accordance with: Austroads Guide to Traffic Engineering Practice Part 13: Pedestrians. • In areas with larger volumes of pedestrian traffic, lighting should be provided from two sources, eliminating the problems of walking in one's shadow. 			<p>Provide lighting along footpaths and shared paths intended for use after dark</p>	<p>KCC Transport and Traffic</p> <p>VicRoads</p> <p>Service Provider</p>
9. Awareness and education	<p>Lack of awareness and education about the needs of pedestrians who use mobility equipment.</p>	<ul style="list-style-type: none"> • Encouraging shop owners to ensure their premises are inclusive and accessible to all. • Encouraging retail owners who have stepped access into their buildings to use portable ramps when appropriate and training staff how to use the ramps. Portable ramps are only short term solutions. • Advocate for appropriate design measures during the planning, design and maintenance of activity centres. 			<p>Raise awareness of the needs of people using mobility equipment in all media campaigns</p>	<p>KCC Local Laws</p> <p>KCC Access and Inclusion</p>

Guiding Principles

Shared path width

Shared use pathways should be a minimum of 2.5m wide to improve safety for multiple users.

VicRoads shared path guidance also recommends 0.3m of clear space on each side of the path.

Where 2.5m is not possible, paths should be 1.5 or 1.8m wide in high traffic areas.

The minimum acceptable width is 1.2m which is acceptable as long as bike users don't use the path.

General Principles

In addition to the principles described in this document, there are many general urban design principles which will also improve the environment for people with impaired mobility, these include:

- Increased density of the urban design (with more meaningful open space) so that pedestrian journeys are shorter and vehicular journeys are fewer.
- Improved public transport
- Improved active frontages along the streetscape to provide an element of passive surveillance from adjacent retail outlets and contribute to a sense of security.
- Improved ambience including streetscapes designed on a 'pedestrian scale' rather than a 'vehicular scale', places which encourage interesting human interactions and pleasant pedestrian journeys.

Typical shared pathways



Typical traffic control in activity nodes



Typical cross section of a shared path

Path width: Paths width 2.5m with 0.3m clear margins width for shared paths, 1.8m in high traffic areas or 1.5m

Sightlines: 2m clear stem under tree canopy to retain views

Pause Point: Seating and shade provided at strategic points

