DESIGN GUIDANCE | SPACES FOR PEOPLE

1. WALKING AND WHEELING

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Spaces for People

1. WALKING AND WHEELING

Contents

OVERVIEW

This guidance has been developed to support partners with the implementation of temporary active travel facilities in Scotland, through Scottish Government's Spaces for People fund, which is administered by Sustrans.

Spaces for People is designed to improve health and well-being so that everyone is able to move around their local area safely while keeping to physical distancing requirements as we transition through and out of the COVID-19 crisis.

Walking, cycling or wheeling in fresh air is not only positive for physical health, but also helps people feel connected in times of isolation, and can allow communities discover their neighbourhood.

Any temporary measures put in place should make an area better, and care should always be taken to ensure people with disabilities and other groups in need additional support are considered appropriately.

Atkins worked collaboratively with Sustrans to develop this content.

Content is derived from best practice examples from across the globe. It is intended to provide inspiration for the design of temporary facilities and should not be seen as a prescriptive design solution.

Each topic area includes advisory text, examples of best practice and minimum design parameters where applicable.

Each area also includes road safety and mobility impairment considerations to guide the designer to providing mitigating measures from the outset.

Appropriate road safety risk assessments should be undertaken during design and road safety audits undertaken at appropriate stages before schemes are open for public use.

Content will be regularly reviewed and updated by Sustrans Scotland.

Disclaimer: The ideas, products and suggestions within this document are provided for information only and in relation to temporary facilities to help with the management of physical distancing and movement across town and city centres. It provides a collection of national and international examples of temporary infrastructure which may be of use in designing similar schemes across Scotland. Sustrans and Atkins do not accept any liability in relation to the use of the content of this document.

Where specific products are shown in this document, this does not constitute an endorsement of that product.

Figure 1. Lane separators along Old Dalkeith Road in Edinburgh.

Walking and Wheeling

TIMELINE

Depending on the duration of time that temporary infrastructure is predicted to be in operation, different types of interventions may be more or less beneficial. The graphic below outlines some of considerations that might be made when selecting appropriate measures for differing timescales.

Although traffic cones and standing signage are effective in that they can be implemented quickly and easily, their utility is limited as a long-term solution. This is because of the ease with which they can be interfered with and otherwise circumvented. It is for this reason that semi-permanent solutions, such as heavy planters and bollards, may be more effective as long-term solutions.

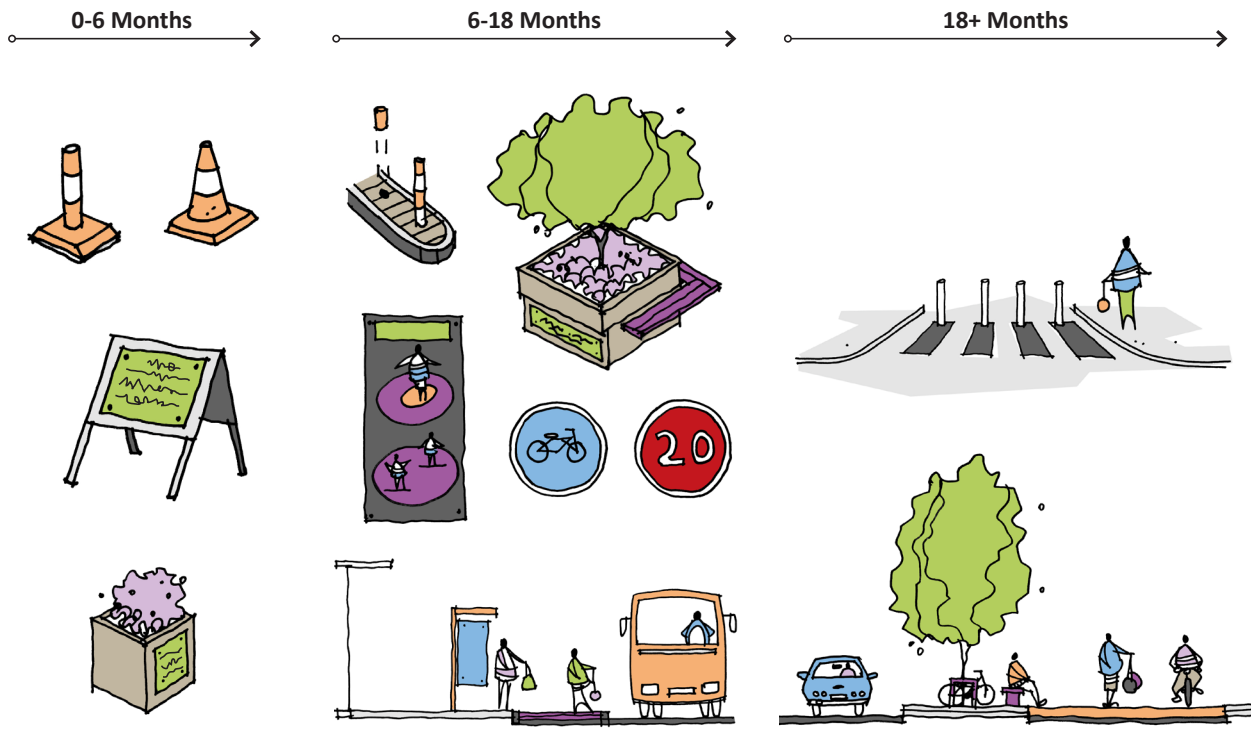

Figure 2. Timeline

1.1 WIDENING FOOTWAYS

Cross Sections

It is expected that 3 metres minimum footway width is needed to maintain physical distancing.

This is the minimum for two pedestrians to cross and greater width is recommended to provide for users with pushchairs etc.

Potential options

- Widening into carriageway.
- Widening into parking bays.
- Widening into loading bays

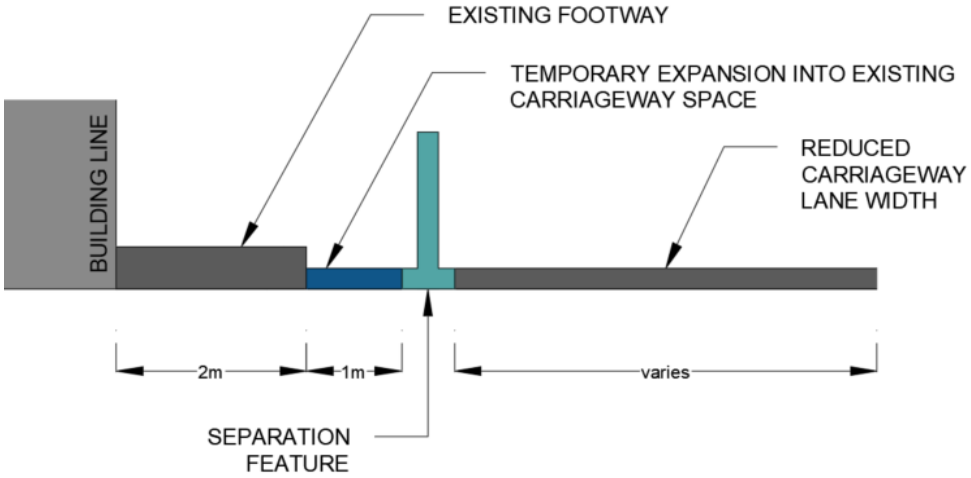

Figure 3. Temporary build out example

Key Considerations

- Streets with **high footfall will likely require greater width** and/or separation by direction of travel.
- **Temporary expansion** in to carriageway could be at carriageway level or built up to the same level as the footway but safe access between the two will be needed.
- **Additional space** will be required **to facilitate queueing** outside shops.
- **Accessibility for mobility impaired users** should be considered from the outset of each scheme.
- **Physical separation from carriageway** (more than markings or cones) will likely to be required to protect pedestrians and prevent misuse by others.
- **Experimental Traffic Regulation Order** (TRO) or **Temporary Traffic Regulation Order** (TTRO)* may be required.
- Where dropped kerbs are used, consideration should be given to the **longer term impacts** of this on the network.

*TTROs require no prior consultation and are relatively flexible so there is the potential for local authorities to assess and put in place temporary measures relatively quickly and responsively. More information can be found here:

https://www.transport.gov.scot/media/47432/coronavirus-covid-19-guidance-on-temporary-traffic-regulation-orders-and-notices.pdf

For additional information please refer to:
Edinburgh Street Design Guidance : Part C – Detailed Design Manual

Potential Options for Separation from the Carriageway

- **Temporary traffic management barriers/ cones/markings** a short term solution that may be subject to misuse (e.g. moving of cones and barriers for access and/or parking)
- **Temporary build outs** a medium/long term solution that may provide a more permanent look and feel as well as increase the perception of safety amongst users. Could be implemented at parking bays and loading bays if removing them
- **Satellite islands and lane separators** a medium/long term solution that potentially increases the perception of safety for users and is less subject to misuse by others.

Figure 4. Temporary build out example

Examples of Satellite Islands and Lane Separators for Footway Widening and Specific Key Considerations

Satellite islands

- Approx. 600mm wide
- Requires gaps for drainage and crossing points
- Potential for use in heritage environments
- Could be considered a trip hazard, especially by those who are visually impaired

Lane separators

- Approx. 500mm wide
- Requires gaps for drainage and crossing points
- Potential for use in heritage environments
- Tonal contrast could help identify feature but still potentially help a trip hazard for some users

Figure 5. Satellite Island

Figure 6. Line Separators

Road Safety Considerations

- **Risk of slips, trips and falls** where an existing kerb upstand segregates the new widened footway.
- Risk of **trip hazards** caused by 'feet' of barrier systems.
- Risk of slips, trips and falls when using **thermoplastic** paint on footways (particularly when wet).
- Physical separation between extended footway and carriageway should be decided upon on a case by case basis taking in to account **speed and volume of vehicular traffic and likely pedestrian flows**. Fixed separating features will likely improve the user perception of safety when compared with cones and markings and help prevent unauthorised use by vehicles - parking and loading etc.
- **Risk to visually impaired pedestrians** where street furniture obstructs new footway width – which may include existing cycle parking stands and street furniture, for example.

For additional information please refer to:
Edinburgh Street Design Guidance : Part C – Detailed Design Manual

- Risk of slips, trips and falls where **different surfaces** are used along a walking route – for example tarmac surfacing leading to cobbled surfacing.
- Where widening footways in to carriageways, **maintenance of drainage channels** will be key to managing risks of slips, trips and falls associated with the build up of debris, localised ponding and ice in winter months.

Figure 7. Trip hazards caused by 'feet' of barrier systems

Figure 8. Temporary changes to carriageway/footway

Figure 9. Physical distancing signage on footway

1.2 MANAGING PEDESTRIAN FLOWS

Queueing and Pedestrian Flows in Highstreets

- Access to entry and exit routes at shops, public transport interchanges and public buildings should be maximised and clearly marked to reduce queues. Pedestrian 'pinch points' should be minimised by removing obstacles in the footway and pedestrian barriers
- Queuing and waiting areas should be defined using temporary signage and barriers plus use of marshals provided by the facility as appropriate. Extra space should be allowed where multiple queues may meet.
- "Do not join the queue" signs could be provided at popular destinations, when capacity reached. Opening times could be staggered for popular destinations.
- Bus stops should be moved to areas which can accommodate queuing in line with physical distancing requirements.

***Note:** Responsibility for the management of queues outside shops, stations, bus stops and other businesses will likely rest with the operator.*

Figure 10. Managing pedestrian flows in an urban environment

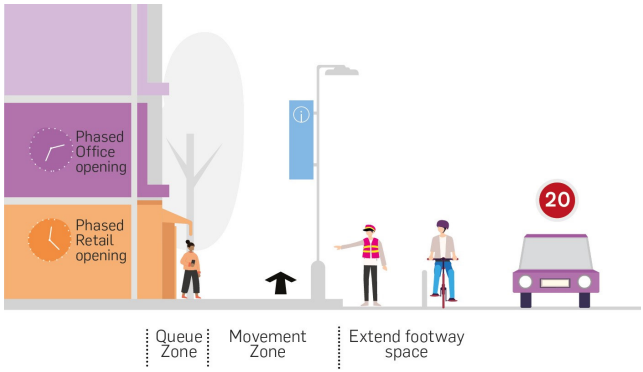

Figure 11. Allocation of queuing and movement space on a footway with phased office and retail opening times

Key Considerations

- Markings and easily moved objects may not always result in **consistent physical distancing**
- Features that form b**arriers may prevent pedestrians moving** into other areas to maintain physical distancing
- The placement of and signs and location of queuing zones should **allow other footway users space to pass safely.**
- Where possible signage should be attached to existing street furniture or building frontages.

For additional information please refer to:
Edinburgh Street Design Guidance : Part C – Detailed Design Manual: P2 - Promoting Pedestrian Movement and Activity

Queueing and Pedestrian Flows for Residential Areas

- Many of the above High street measures could be considered at a smaller scale at local shops.
- Enough space for physical distancing should be indicated at bus stops and crossing points
- Space for higher numbers of family groups and pushchairs should be allowed for at busy locations
- Access to entry and exit routes at schools and public buildings should be maximised with clearly marked separate entry and exit routes.

Figure 12. Physical distancing considerations in residential areas

Additional Considerations for Heritage Areas

- Temporary measures in designated heritage areas should be **reversible and avoid permanent change or damage** to the valued qualities of the physical environment.
- Any semi-permanent (1 year +) or permanent changes such as fixed street furniture, or placement of long-term signage should **comply with local planning and heritage designations,** be of materials/ appearance appropriate to the heritage setting.

Figure 13. Edinburgh comparison May 2019 - May 2020 in lockdown

Examples - Signage

Signage and communications to remind pedestrians of distance requirements. This could include:

- Crossing points and intersections
- Entrances and exits
- Bus stops and public transport interchanges

Figure 14. Bus stop signage

Figure 15. Signage at entry/exit

Examples – Markings to Indicate Physical Distancing and Queuing Areas

These should be along the building frontage or within safe spaces where no footway obstruction is caused.

Figure 16. Managing pedestrian queues to the building entrance

Figure 17. Managing pedestrian queues at railway stations

Figure 18. Managing pedestrian queues for public transport

Mobility Impairment Considerations

Security considerations, and the impact of measures on people with disabilities and other groups, should be considered when designing temporary facilities.

This includes access for blue badge holders and may call for a balanced approach.

For pedestrian movement, these considerations might include the following:

- **Seating** for elderly in waiting areas.
- **Clearly marked ramps** should be provided where levels change such as where pedestrian zones are extended into parking or carriageway areas.
- Pedestrian surfaces including temporary areas should be **safe and even to walk** on avoiding trip hazards and rough ground
- Physical distancing measures should not create obstacles or hazards for **visually impaired users**.
- **Marshals** provided by shops or facilities could prioritise disabled or other vulnerable groups in queues.

Figure 19. Marshals to support queuing system

Figure 20. Marshals could prioritise disabled or other vulnerable groups in queues

Figure 21. Clear and safe routes

Figure 22. Maintain clear zones for visually impaired users

For additional information please refer to:
Edinburgh Street Design Guidance : Part C – Detailed Design Manual: M4 – Tactile Paving, Crossings &Junctions

Road Safety Considerations

- **Route continuity** – continuous routes should be provided to reduce the risk of injury to pedestrians having to negotiate breaks in the route.
- **Pedestrian awareness** – Where pedestrian lanes are provided, the lane closest to the traffic lane should face the direction of oncoming traffic.
- **Expected flows** - Where pedestrian flows are expected to be high, signs and road markings should be used to encourage pedestrians to keep to one side of the footway to improve movement.
- **Visually impaired pedestrians** – Signs should utilise contrasting colours.
- **Road markings** - where priority is given to pedestrians over vehicles, this should be made clear with the appropriate road markings.

Figure 23. Highway Marking, Barcelona

Figure 24. Pedestrian flow management, Copenhagen

1.3 PUBLIC TRANSPORT INTERACTION

Bus Stop Realignment - High Streets

- **Extra space** should be provided for boarding and queueing at bus or tram stops in busy shopping streets or where this is not possible should be moved to areas which can accommodate queuing in line with physical distancing requirements.
- **Queuing areas** should be defined at busy interchanges allowing sufficient footway space for pedestrians to pass safely.

Bus Stop Realignment – Residential Streets

- **Busy bus stops** next to schools, or local shops or facilities may require additional space in line with measures described for highstreets.
- **Information on physical distancing** should be indicated at bus stops.

Replacement / Temporary Bus Boarder Kerbs

- Where **temporary bus boarder kerbs** are required or need to be temporarily extended to allow additional space for physical distancing.
- Ensure **level changes and ramps** are clearly marked.

Figure 25. Widened footway at bus stop

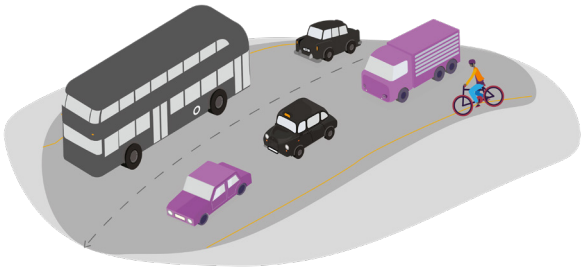

Figure 26. Public transport interaction on the High Street

Figure 27. Temporary bus boarder

Signage of Bus Gates

A bus gate is a mechanism that gives buses priority over other traffic. This can be a physical barrier such as collapsible bollards or temporary barriers, signage, traffic lights or virtual mechanisms that are activated by bus proximity.

Mobility Impairment Considerations

- **Access to bus stops across cycle lanes** and tracks **should be avoided**. Where this is not possible consideration should be given to pedestrian hazards including visualy impaired users. Reduce conlicts by providing clearly deliniated areas for boarding and alighting buses
- **Any ramps or level change**s associated with temporary bus boarders or extensions to existing bus boarders should be clearly marked.
- **Signs and markings** setting out waiting zones should be clear and of appropriate colour and contrast to be easily read.
- **Posts, signs and bollards** should not obstruct disabled access to board or alight the bus.

Figure 28. Bus gate

Figure 29. Example bus gate signage

Figure 30. Mobility considerations - boarding a bus

Road Safety Considerations

Pinch points at redundant bus stops creating an obstruction in pedestrian routes

Street furniture associated with bus stops which are temporarily relocated increase the risk of personal injury incidents. Consideration should be given to the reallocation of carriageway space at these sites to allow a safe route for pedestrians around the street furniture.

Temporary facilities for mobility impaired pedestrians at temporary bus stops

Temporary ramps for access to and from buses do exist, but their placement will be key to safe operation for users. Where cycle lanes or cycle tracks are provided between the existing footway and carriageway, a ramp structure is likely to block access for pedestrians and cyclists. Similarly, a ramp structure may present a hazard to vehicle occupants if struck from the carriageway.

Figure 31. Temporary facilities at bus stop

EXAMPLES OF FOOTWAY WIDENING

Figure 32. Footway Widening around a bus stop, Brixton

Figure 33. St Marys Street Cardiff - one way proposals

Figure 34. London visual

Figure 35. Cardiff proposals - managing pedestrian flows

Figure 36. Tower Hamlets footway idening with planters

Figure 38. Hackney - widened footway

Figure 40. Leamington Spa pedestrian queuing

Figure 37. Deansgate, Manchester

Figure 39. Milan - changes to walking and cycling routes

Figure 41. Altrincham widened footway

IMAGE REFERENCES

Figure 1. Lane separators along Old Dalkeith Road in Edinburgh.
Photograph, courtesy of Atkins

Figure 2. Timeline
Diagram Courtesy of Atkins

Figure 3. Temporary build out example
Diagram courtesy of Atkins

Figure 4. Temporary build out example
Photograph, courtesy of Atkins

Figure 5. Satellite Island
Photograph, courtesy of https://www.rosehillhighways.com/products/refuge-islands/one-piece-traffic-island/

Figure 6. Line Separators
Photograph, courtesy of https://www.rosehillhighways.com/products/lane-separators/

Figure 7. Trip hazards caused by 'feet' of barrier systems
Photograph, courtesy of Atkins

Figure 8. Temporary changes to carriageway/footway
Photograph, courtesy of Atkins

Figure 9. Physical distancing signage on footway
Photograph https://www.manchestereveningnews.co.uk/

Figure 10. Managing pedestrian flows in an urban environment
Diagram courtesy of Atkins

Figure 11. Allocation of queuing and movement space on a footway with phased office and retail opening times *Diagram courtesy of Atkins*

Figure 12. Physical distancing considerations in residential areas
Diagram courtesy of Atkins

Figure 13. Edinburgh comparison May 2019 - May 2020 in lockdown
Photographs, www.camera-obscura.co.uk & google

Figure 14. Bus stop signage
Photograph, Brixton Station, courtesy of Atkins [Taken 05.2020]

Figure 15. Signage at entry/exit
Photograph, Entrace and Exit to Haymarket Station, Edinburgh, courtesy of Atkins

Figure 16. Managing pedestrian queues to the building entrance
Photograph, https//nz.news.yahoo.com

Figure 17. Managing pedestrian queues at railway stations
Photos,Gare du Nord train station, Paris - https//nz.news.yahoo.com

Figure 18. Managing pedestrian queues for public transport
Photograph, Brixton Station, courtesy of Atkins [Taken 05.2020]

Figure 19. Marshals to support queuing system
Photograph, 2012 Olympic Volunteer, CNN.com

Figure 20. Marshals could prioritise disabled or other vulnerable groups in queues
Photograph, Elderly Couple, taken by Garry Knight , Creative Commons

Figure 21. Clear and safe routes
Diagram courtesy of Atkins

Figure 22. Maintain clear zones for visually impaired users
Photograph https://cyclingindustry.news/government-urged-to-prioritise-freedom-of-movement-of-disabled-people/

Figure 23. Highway Marking, Barcelona
https://nz.news.yahoo.com/coronavirus-gallery-covid19-social-distancing-140452657/photo-to-worker-paint-

Figure 24. Pedestrian flow management, Copenhagen
https://nz.news.yahoo.com/

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Photograph, Brixton Station, courtesy of Atkins [Taken 05.2020]

Figure 26. Public transport interaction on the High Street
Diagram Courtesy of Atkins

Figure 27. Temporary bus boarder
Photograph, Brixton Station, courtesy of Atkins [Taken 05.2020]

Figure 28. Bus gate
Bus Stop Gate, Aberdeen, taken by Bill Harison, Creative Commons

Figure 29. Example bus gate signage
https://www.gov.uk/guidance/the-highway-code/traffic-signs

Figure 30. Mobility considerations - boarding a bus
Lothian Bus, Disabled Access - https//www.transportxtra.com

Figure 31. Temporary facilities at bus stop
Photograph, courtesy of Atkins

Figure 32. Footway Widening around a bus stop, Brixton
https://www.transportxtra.com/publications/local-transport-today/news/65490/temporary-foot-paths-and-cycle-lanes-to-ease-covid-19-pressures/

Figure 34. London visual
www.theguardian.com

Figure 33. St Marys Street Cardiff - one way proposals
Photograph, courtesy of Arup

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www.theguardian.com

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Adam Hughes/SWNS

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