Department for Transport

Local Cycling and Walking Infrastructure Plans

Technical Guidance for Local Authorities

April 2017

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1. Background

Cycling and Walking Investment Strategy

1.1 In 2017 the Government published its first Cycling and Walking Investment Strategy (The Strategy). The Strategy sets out the Government's ambition to make walking and cycling the natural choices for shorter journeys or as part of a longer journey.

1.2 Realising this ambition will take sustained investment in cycling and walking infrastructure, and partnership working with local bodies, the third sector and the wider public and private sector to build a local commitment.

1.3 The Strategy supports the transformation of local areas: change which will tackle congestion, change which will extend opportunity to improve physical and mental health, and change which will support local economies.

1.4 The Strategy's objectives, by 2020, are to:

- increase cycling activity, where cycling activity is measured as the estimated total number of cycle stages made
- increase walking activity, where walking activity is measured as the total number of walking stages per person
- reduce the rate of cyclists killed or seriously injured on England's roads, measured as the number of fatalities and serious injuries per billion miles cycled
- increase the percentage of children aged 5 to 10 that usually walk to school

1.5 Further to this, the following aims and target have been set, respectively, to 2025:

- to aim to double cycling, where cycling activity is measured as the estimated total number of cycle stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025, and to work towards developing the evidence base over the next year
- to aim to increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 300 stages per person per year in 2025, and to work towards developing the evidence base over the next year
- to increase the percentage of children aged 5 to 10 that usually walk to school from 49% in 2014 to 55% in 2025

By 2040, our ambition is to deliver:

BETTER SAFETY **'A safe and reliable way to travel for short journeys'**	• streets where cyclists and walkers feel they belong, and are safe • better connected communities • safer traffic speeds, with lower speed limits where appropriate to the local area • cycle training opportunities for all children
BETTER MOBILITY **'More people cycling and walking - easy, normal and enjoyable'**	• more high quality cycling facilities • more urban areas that are considered walkable • rural roads which provide improved safety for walking and cycling • more networks of routes around public transport hubs and town centres, with safe paths along busy roads • better links to schools and workplaces • technological innovations that can promote more and safer walking and cycling • behaviour change opportunities to support increased walking and cycling • better integrated routes for those with disabilities or health conditions
BETTER STREETS **'Places that have cycling and walking at their heart'**	• places designed for people of all abilities and ages so they can choose to walk or cycle with ease • improved public realm • better planning for walking and cycling • more community-based activities, such as led rides and play streets where local places want them • a wider green network of paths, routes and open spaces

2. Overview of Local Cycling and Walking Infrastructure Plans

Local Cycling and Walking Infrastructure Plans

2.1 Local Cycling and Walking Infrastructure Plans (LCWIPs), as set out in the Government's Cycling and Walking Investment Strategy, are a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10 year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

2.2 The key outputs of LCWIPs are:

- a network plan for walking and cycling which identifies preferred routes and core zones for further development
- a prioritised programme of infrastructure improvements for future investment
- a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network

2.3 By taking a strategic approach to improving conditions for cycling and walking, LCWIPs will assist Local Authorities (LAs) to:

- identify cycling and walking infrastructure improvements for future investment in the short, medium and long term
- ensure that consideration is given to cycling and walking within both local planning and transport policies and strategies
- make the case for future funding for walking and cycling infrastructure

2.4 While the preparation of LCWIPs is non-mandatory, LAs who have plans will be well placed to make the case for future investment.

LCWIP Guidance

2.5 The LCWIP guidance sets out a recommended approach to planning networks of walking and cycling routes that connect places that people need to get to, whether for work, education, shopping or for other reasons.

2.6 It provides technical guidance for Local Authorities (LAs) comprising Local Highway Authorities (LHAs), Local Transport Authorities (LTAs), Local Planning Authorities (LPAs) and Combined Authorities (CAs); and Local Enterprise

Partnerships (LEPs). It will be of benefit to a wide range of organisations who help to create, modify and manage the built environment.

2.7 Drawing together good practice, including TfL's Cycling Design guidance and the Welsh Active Travel Design guide, the guidance outlines the recommended steps that should be taken when planning for cycling and walking.

2.8 It also explains how a range of tools, such as the Propensity to Cycle Tool (PCT), the Route Selection Tool (RST) and the Walking Route Audit Tool (WRAT), can be used to help develop robust plans and schemes.

2.9 The guidance has been written on the basis that little strategic planning has been carried out locally to develop cycling and walking networks. Each authority will be best placed to consider how the LCWIP process can enhance any work already undertaken. Where LAs already have well-developed cycling and walking plans, selected parts of the process can be applied to refresh the evidence base or refine the prioritisation of schemes.

2.10 There will be overlaps and synergies between LCWIPs and other plans and strategies. For example, most authorities will already have a Rights Of Way Improvement Plan (ROWIP) which explains how improvements made by local authorities to the public rights of way network will provide a better experience for a range of users including pedestrians and cyclists.

2.11 LCWIPs should be reviewed and updated periodically, particularly if there are any significant changes in local circumstances, such as the publication of new policies or strategies, major new development sites, and as walking and cycling networks mature and expand.

Out of Scope Activities

2.12 There are some activities that are not covered by this guidance, but which should be considered when developing and implementing LCWIPs. These include developing a strategic and economic case for investment, undertaking feasibility studies, preparing detailed designs and costings, managing scheme delivery, and monitoring and evaluating performance of schemes.

2.13 Supporting behaviour change interventions are also not covered by the guidance, but should be considered alongside the delivery of infrastructure schemes. Research has demonstrated that investment in both can help to maximise increases in cycling and walking[1].

[1] Meta-analysis of Outcomes of Investment in the 12 Local Sustainable Transport Fund Large Projects: Interim Report, Transport for Quality of Life / TRL for Department for Transport, February 2016.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500220/meta-analysis_of-interim-report.pdf

LCWIP Process

2.14 The LCWIP process includes six stages, as set out in **Figure 1**.

Figure 1: LCWIP Process

Stage	Name	Description
1	**Determining Scope**	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	**Gathering Information**	Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.
3	**Network Planning for Cycling**	Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.
4	**Network Planning for Walking**	Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.
5	**Prioritising Improvements**	Prioritise improvements to develop a phased programme for future investment.
6	**Integration and Application**	Integrate outputs into local planning and transport policies, strategies, and delivery plans.

2.15 The LCWIP process is scalable to suit the size and complexity of the local area. The amount of time taken to develop a LCWIP for a small town will be significantly less than for a large conurbation. For larger geographical areas, authorities may wish to divide their LCWIP into sub-areas, enabling the development of the LCWIP to be phased. In this case, authorities should prioritise areas which have the greatest potential for growing cycling and walking trips.

2.16 Owing to pedestrians and those travelling by cycle generally having different needs and patterns of travel, the LCWIP process divides during the planning stage to allow for different methods of planning and identification of improvements for walking and cycling.

2.17 In following this LCWIP process, authorities should consider their obligation to meet the needs of people with protected characteristics under the Equalities Act 2010; LCWIPs should reflect the needs of all.

Synergies between Cycling and Walking

2.18 Identifying synergies between cycling and walking improvements when developing LCWIPs will maximise the benefits. While the LCWIP process outlines separate approaches to planning and identifying walking and cycling improvements, measures that improve conditions for one user group will often benefit the other. Likewise, without a holistic approach to planning, design and

implementation of infrastructure for one mode can negatively impact on the other.

2.19 The needs of equestrians may also need to be borne in mind where they have access; for example, regarding the width of off-carriageway routes, the arrangement of road crossings and differing surfacing standards.

2.20 Infrastructure that caters for the needs of pedestrians and cyclists may include:

- reductions in speed that will improve safety, convenience and journey ambience – for example, through filtered permeability, junction narrowing, raised tables, side road closures and entry treatments, and continuous footways and cycle tracks across junctions
- new or improved crossing designs that both user groups can use safely with minimal potential for conflict
- access to green routes away from the highway that can easily be negotiated by all types of cycle, wheelchair, mobility scooter and people with pushchairs
- paths of sufficient width or separation to enable pedestrians and cyclists to travel side by side and to pass without conflict
- attractive public realm schemes and vehicle restricted areas that meet the needs of people walking and using cycles

Integration with Transport Planning

2.21 Cycling and walking co-exist within complex transport systems that place countless functional requirements on streets and spaces.

2.22 To be successful it is vital that LCWIPs are part of an integrated response to creating better places, safer streets and more reliable journeys. Cycling and walking networks should be an integral component of a transport system that considers the needs of all users, and connects people with places, services and opportunities.

2.23 LCWIPs should clearly link to other strategic transport planning documents, such as Local Transport Plans, and be compatible with other local transport priorities that tackle congestion and unlock growth. Where conflicting priorities are identified, these should be discussed at the earliest opportunity.

2.24 LCWIPs should also be used to ensure that consideration is given to cycling and walking within future local planning and transport policies and strategies, as well as future delivery plans.

2.25 Opportunities should be taken to embed the requirements of cyclists and pedestrians in other transport schemes, such as junction improvements or maintenance works. Good cycling and walking schemes are often delivered as part of comprehensive street redesigns that bring benefits to a wide range of users. For example, significant cycle improvements along Oxford Road in Greater Manchester were introduced as part of a bus priority scheme, enabling improvements to be co-ordinated into a single delivery programme.

Integration with Land Use Planning

2.26 The National Planning Policy Framework (NPPF) sets out how the planning system should help deliver sustainable development, and includes a set of core land-use planning principles which underpin plan-making and planning decisions. The Framework is supported by planning practice guidance issued by the Department for Communities and Local Government.

2.27 Local planning authorities should consider incorporating LCWIPs into Supplementary Planning Documents where this would build upon and provide more guidance on the policies in the Local Plan. Local authorities may also wish to refer to LCWIPs in Area Action Plans and Neighbourhood Plans.

2.28 Where Neighbourhood Plans are being prepared at the same time as the LCWIP, the parish or town council, or neighbourhood forum should be encouraged to engage positively with the LCWIP process.

2.29 The benefits of incorporating LCWIPs into local planning policy are to:

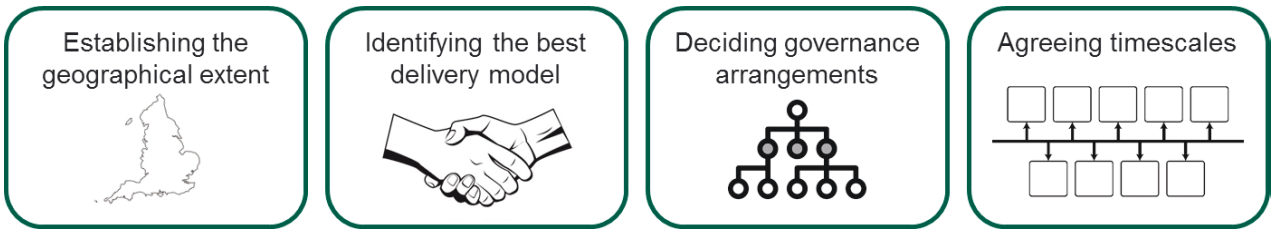
- ensure that appropriate consideration is given to cycling and walking in all local planning and transport decisions, and identify potential policy conflicts
- add to the evidence base which can be used to support a Local Plan, Neighbourhood Plan or Local Transport Plan
- enable the consideration and adoption of wider policy levers to encourage more walking and cycling
- enable authorities to seek appropriate contributions to the provision of walking and cycling infrastructure when drawing up the Regulation 123 list for the Community Infrastructure Levy; through planning agreements in the form of Section 106 obligations; and when Section 278 highway agreements are made
- identify places where new strategic cycling or walking routes can be delivered by a new development, and ensure the protection of alignments for future planned cycling and walking routes

2.30 Preparing LCWIPs should also help authorities to consider the impact of planning applications and other proposed land use changes on existing and planned cycling and walking infrastructure, and to identify sites that are well served, or capable of being well served, by cycling and walking routes. The existence of a LCWIP will assist developers in the preparation of Travel Plans, Transport Assessments and Statements.

3. Determining Scope – Stage 1

Stage Summary

3.1 The first stage of the LCWIP process involves:



3.2 It is recommended that at the end of the stage a short **Scoping Report** is produced, setting out the proposed delivery arrangements and timescales. This should be approved by the Senior Responsible Owner, agreed by the Project Board, and shared with relevant stakeholders.

Establishing the geographical extent of the LCWIP

3.3 In most cases a LCWIP will be focused on a particular town or regional centre. For larger geographical areas, such as larger cities, authorities may wish to prepare a LCWIP for a number of sub-areas, enabling the development of the LCWIP to be phased.

3.4 When defining the geographical area to be covered by the LCWIP, the likely distance that would be travelled by cycle or on foot should be considered. Cycling has the potential to replace trips made by other modes, typically up to 10km, although some people will cycle greater distances. For walking, the distances travelled are generally shorter, typically up to 2km. Therefore, the area covered will typically be concentrated on some Core Walking Zones and key walking corridors providing access to major attractors.

3.5 Travel to Work areas should also be considered, as well as the location of significant trip generators, such as key employment sites, transport interchanges, and new housing developments.

3.6 Where built-up areas straddle authority boundaries, or significant trip generators are located in neighbouring authorities, the LCWIP might extend beyond the boundary of a single local authority. This will require collaboration between neighbouring LAs, and agreement on the best approach to preparing the LCWIP and resulting walking and cycling networks.

3.7 Given their regional role, Combined Authorities - where they exist, or otherwise LEPs, should ideally contribute to determining the geographic extent of LCWIPs, especially where a cross boundary approach is required.

3.8 For authorities that are dividing their LCWIP into a number of sub-areas, priority should be given to areas which have the greatest potential for growing cycling and walking trips; for example, key employment zones, regional centres, key interchanges, and opportunities to generate leisure and tourism income regional centres, key interchanges or new development sites.

Setting up arrangements for governance and delivery

3.9 Governance and delivery arrangements need to be proportionate to the scale and complexity of the LCWIP. In order not to duplicate effort, opportunities to use existing local delivery and governance arrangements should also be identified.

3.10 In establishing the best delivery model for preparing the LCWIP, consideration should be given to the level of cross-boundary liaison required. Potential delivery models are set out in **Figure 2**.

Figure 2: Potential Delivery Models

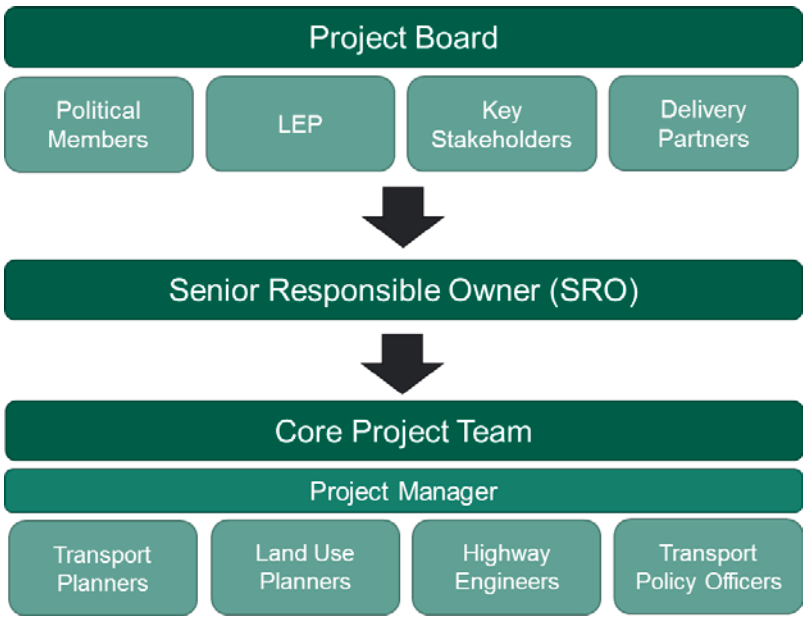
Delivery Model	Description
Single local authority	There are a low number of potential trips that cross the LA boundary. The area covered by the LCWIP is therefore entirely within a single LA and will be its sole responsibility. This includes Combined Authorities.
Lead local authority with cross-boundary liaison	There are a number of potential trips that cross the LA boundary. In this case the LCWIP should be prepared with the co-operation of the neighbouring authorities.
Joint local authority	There are a significant number of potential trips between neighbouring authorities and therefore the preparation of the LCWIP should be a joint exercise between authorities.

3.11 Once a delivery model has been agreed, a project team should be established and a project manager identified. LAs will be best placed to decide the composition of the project team and it is expected that this will vary between authorities. Ideally a project team should include officers from transport and land use planning teams, as well as highways and engineering teams. Delivery partners, such as Highways England, Network Rail, and the Canal and River Trust, may be included in the project team, especially where there may be some direct impact of their network or assets.

3.12 A Senior Responsible Owner should also be identified who will have overall accountability for delivering the plan. This is likely to be a senior manager within the LA, such as a functional head of department or director, who has the delegated responsibility to approve outputs and escalate issues.

3.13 Ideally a project board should also be established with the overall responsibility for ensuring the integration of the plan with wider authority objectives and strategies. This should include both senior managers from within the LA, as well as key delivery partners and stakeholders. Opportunities to utilise existing governance arrangements, such as other programme or strategy boards, should be explored to minimise the local resource implications. A suggested governance structure is set out in **Figure 3**.

Figure 3: Suggested Governance Structure



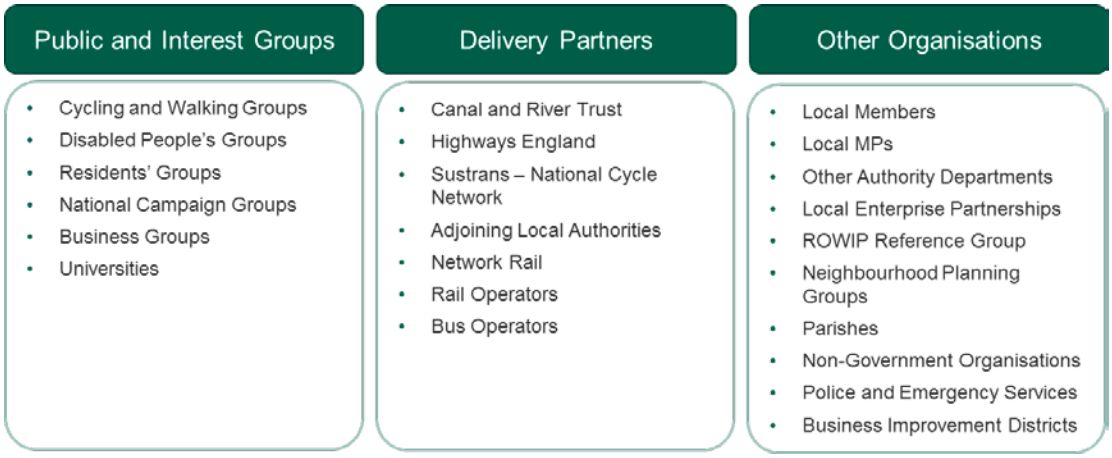
Engagement

3.14 Effective engagement is critical to ensuring that high quality LCWIPs are produced. Stakeholders should be identified at the outset of the LCWIP process, with a planned approach to engagement agreed. It is important to communicate with stakeholders throughout the process, and consult with them at critical decision points, enabling their views to be expressed and considered.

3.15 Actively engaging with local political members and the LEP throughout the process will enable any challenges to be identified at the earliest opportunity and ensure that the LCWIP has local commitment. Where delivery partners, such as Highways England, the Canal and River Trust, Network Rail or National Park authorities, are not directly involved in the project board or project team, measures should be put in place to make sure that they are consulted throughout the process **(Figure 4)**.

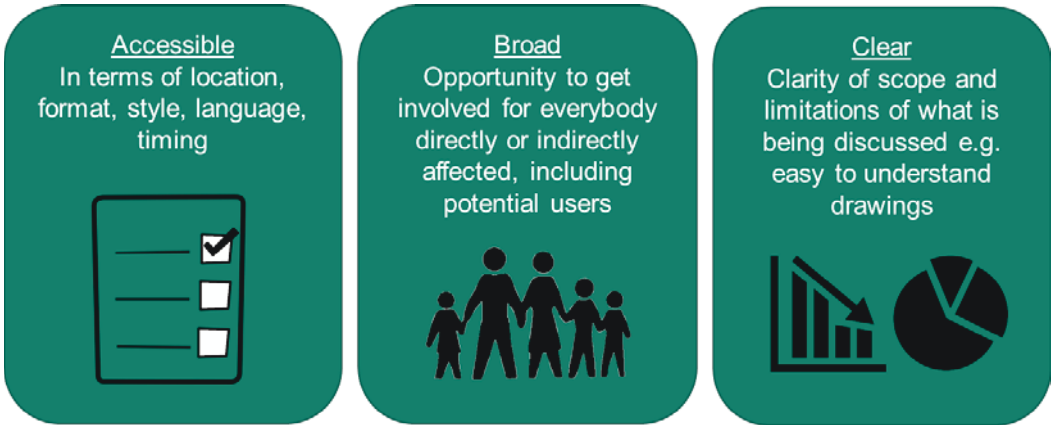
3.16 Engaging with people who currently walk and cycle, as well as with people who would be interested in walking and cycling more often, is proactively encouraged. This could include holding public meetings or drop-in sessions to discuss the emerging plans and local priorities.

Figure 4: Suggested Stakeholders



3.17 Engagement should be as extensive as possible to help ensure all those who may be affected by the emerging plan have a chance to input concerns and ideas. It will be important to engage with those representing groups with protected characteristics under the Equalities Act 2010. Consideration should be given to the relevant statutory Impact Assessments. The Principles of Engagement are set out in **Figure 5**.

Figure 5: Principles of Engagement– the ABC Requirements:[2]



3.18 Numerous resources are available that provide more detailed advice on successful techniques for involving, engaging and consulting with the public, including 'Involving the Public and Other Stakeholders' published by the Chartered Institution of Highways and Transportation.[3]

Timescales

3.19 LCWIPs should set out a long-term approach to developing local walking and cycling networks, ideally over a 10 year period. To assist with delivery and allocation of funding, infrastructure improvement schemes should be broadly

[2] Design Guidance – Active Travel (Wales) Act 2013
[3] http://www.ciht.org.uk/en/knowledge/streets-and-transport-in-the-urban-environment/

divided into three delivery periods: short-term delivery (typically <3 years), medium-term (typically <5 years) and long-term delivery (typically >5 years).

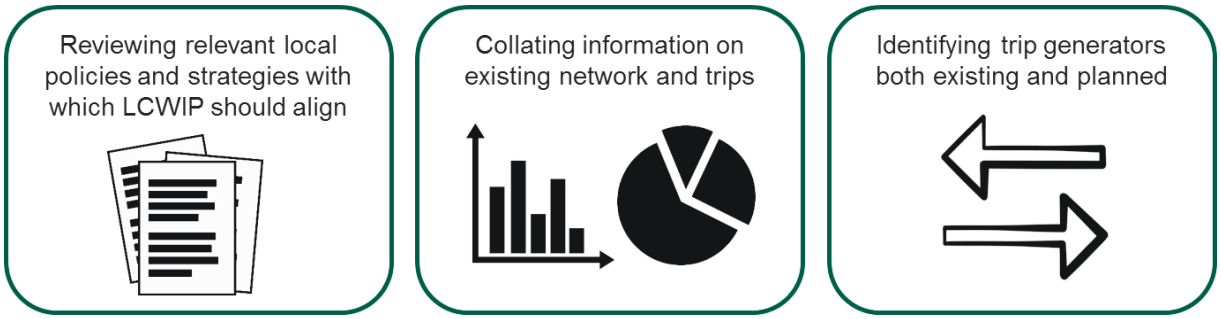
3.20 The time periods may vary from authority to authority depending on how the LCWIP links to existing planning documents or funding streams. For example, the authority may decide to align the LCWIP timescale to a Local Transport Plan or to the duration of a current Government funding round.

3.21 In line with other transport plans, it is envisaged that the LCWIP will need to be reviewed and updated approximately every four to five years to reflect progress made with implementation. LCWIPs should also be updated if there are significant changes in local circumstances, such as the publication of new policies or strategies, major new development sites, or new sources of funding.

4. Gathering Information – Stage 2

Stage Summary

4.1 The second stage of the LCWIP process involves:



4.2 The information gathered during this stage will be used during the planning and prioritising stages of the LCWIP process. LAs may find it useful to produce a short **Background Report** summarising the key findings. This should be shared with the Senior Responsible Owner, members of the Project Board, and where appropriate, relevant stakeholders.

Suggested Information and Data Sources

4.3 LCWIPs should be evidence-led, based on data showing the number of existing and potential trips that could feasibly be made on foot and by cycle if conditions were improved.

4.4 A broad range of information should therefore be gathered to inform the preparation of the LCWIP. It is recommended that information covering the following themes is gathered and analysed:

- **Transport network** – including existing walking and cycling networks, as well as synergies with other planned and proposed transport and land use schemes that could directly or indirectly impact on walking and cycling
- **Travel patterns** – including data about existing walking and cycling trips, and journeys that people currently make by other modes of transport, to identify where cycling and walking might be able to form part or all of a journey
- **Location of significant trip generators** – including the location and size of existing and planned trip generators, such as key employment sites, transport interchanges, education facilities and housing developments

- **Perception of existing facilities** – including people's concerns about making journeys on foot or by cycle, and requests for new or improved routes and facilities

4.5 This data can normally be collected by reviewing existing published sources, including Local Transport Plans, cycling and walking strategies, and previous funding applications. Authorities may wish to gather additional qualitative and quantitative data to support the preparation of the LCWIP if there are significant gaps, or to verify previous assumptions.

4.6 Data can potentially take a significant amount of time to identify, locate and bring together. It will be useful to think about the following:

- What data does the authority already have?
- What data may it be able to obtain relatively easily?
- Are there any gaps in the data available, and are these significant enough to be of concern?
- Is there proxy data that would work as a substitute?

4.7 The data gathered should be appropriate to the size and complexity of the area covered by the LCWIP. Where possible, local data should be used, but if this is not available, national data or proxy data may be considered. A suggested list of potentially useful data sources can be found in **Figure 6**.

Propensity to Cycle Tool

4.8 It is strongly recommended that authorities make use of the DfT-funded Propensity to Cycle Tool (PCT) through the LCWIP process. The PCT is a freely-available online resource that has been designed to help with the strategic planning of cycling networks.

4.9 The tool comprises an interactive map that shows the current and potential future distribution of commuter cycling trips under different potential future growth scenarios. It provides numerical and graphical outputs, including estimated numbers of cyclists in an area, along straight 'desire' lines and along routes.

4.10 Using the 2011 Census Journey to Work data, the PCT can assist with the preparation of LCWIPs at a number of different stages, including:

- planning the cycle network:
  - mapping trip origins and destinations (trip generation)
  - identifying desire lines for cycle trips (trip distribution)
  - allocating trips to specific routes (trip assignment)
- defining potential demand for cycling across the geographical area covered by LCWIPs, under different scenarios
- assisting with scheme prioritisation

4.11 The PCT will be of particular assistance in defining potential demand for cycling, identifying the most promising routes and areas for investment, and estimating future capacity needs for route and area-based measures.

4.12 Further information about the application of the Propensity to Cycle Tool can be found in **Annex A.** The tool can be found at: www.pct.bike.

Figure 6: Suggested Data Sources

National

- National Travel Survey
- Active People Survey
- Data from the Office of National Statistics, in particular Journey to Work data by mode (at Lower Super Output Area level)
- Collision data for cyclists and pedestrians (STATS19)
- Traffic counts and travel survey data
- Propensity to Cycle Tool
- Air quality data

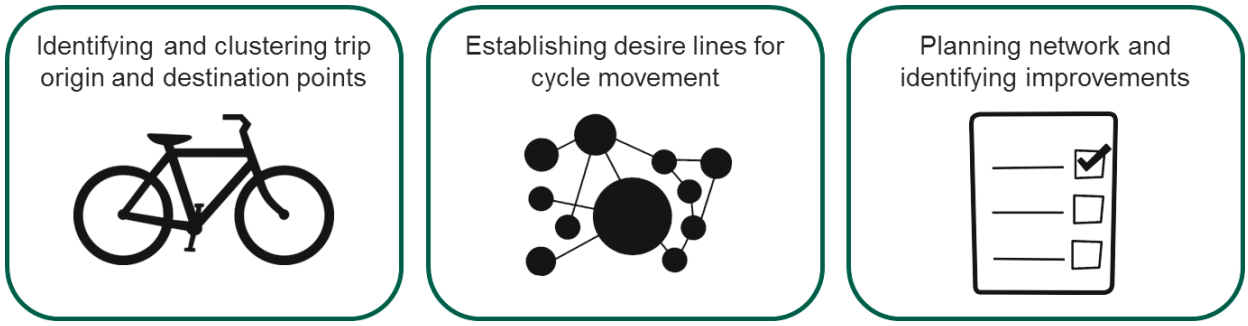
Local

- Traffic, cycle and pedestrian flow data
- Traffic speed data
- Travel plan data from employers, new developments and education establishments
- Cycle Skills Network Audits
- Data on road traffic collisions involving cyclists and pedestrians
- Travel survey data
- Existing cycle routes
- App-based data for existing cycle trips (e.g. Strava)
- Rights of Way information
- Land use mapping, including green spaces and parks
- Flood risk and wildlife data
- Attitudinal/satisfaction surveys
- Existing cycling and walking proposals
- Plans or proposals for the development of non-vehicular routes, quiet lanes, home zones, traffic calming or rights of way improvement plans
- Traffic management plans
- Highways England road schemes
- Locally-planned road schemes
- Road safety improvement schemes
- Strategic bus or light rail plans or schemes
- Public realm improvement schemes
- Network Rail plans, such as new stations, station improvements or changes to bridges
- Significant new developments, which may include infrastructure provision either provided for or affecting cycling and walking
- Strategic Economic Plans produced by Local Enterprise Partnerships
- Local Transport Plans and other strategic transport plans
- Local Plans, including Supplementary Planning Documents and Area Action Plans
- Rights of Way Improvement Plans
- Highway maintenance plans
- Road Safety Improvement Plans
- Asset management plans
- Maintenance plans
- Neighbourhood plans
- Parish plans
- Public health and physical activity plans and strategies

5. Network Planning for Cycling – Stage 3

Stage Summary

5.1 The third stage of the LCWIP process sets out the recommended steps for mapping a future cycle network and identifying cycling infrastructure improvements, and involves:



5.2 The key output of this stage is a **Cycling Network Map** detailing preferred cycle routes for further development.

5.3 Where the routes identified are not of a sufficient quality, a **Programme of Cycle Infrastructure Improvements** will need to be identified.

5.4 As the **Cycling Network Map** and the **Programme of Cycle Infrastructure Improvements** are the key outputs of the LCWIP process, it is important that they are shared with the Senior Responsible Owner, members of the Project Board, and relevant stakeholders. Time should be taken to collect the views of all parties who may be interested or impacted by the proposed network, with the opportunity given for people to express their views.

5.5 This stage is intended for areas where little strategic planning has been undertaken for cycling. If an authority has already developed a long-term cycle network plan, the tools and techniques outlined in this stage could be used to validate it or enhance a programme of investments.

Cycling Network Map and Programme of Cycle Infrastructure Improvements

5.6 The Cycling Network Map and the Programme of Cycle Infrastructure Improvements are both strategic planning documents.

5.7 A Cycling Network Map provides a high level overview of the preferred routes for further investigation and development, while a Programme of Cycle Infrastructure Improvements summarises the improvements that are required in order for routes within the network to be brought up to a suitable standard.

5.8 Both should be completed in sufficient detail to enable an indicative scope of works to be defined.

Mapping Trip Origin and Destination Points

5.9 The identification of demand for a planned network should start by mapping the main origin and destination points across the geographical area covered by the LCWIP. This should preferably be done using a geographic information system (GIS).

5.10 Trip origin points are usually the main residential areas of the settlement, with most utility trips typically having common journey destinations, including:

- city, town and district centres
- employment areas or large individual employers
- educational establishments, including primary and secondary schools, colleges and university campuses
- healthcare establishments, including hospitals and doctors' surgeries
- retail facilities, including local retail centres, supermarkets and retail parks
- community facilities including libraries, sports stadia, performance arenas, visitor attractions, leisure centres, and cultural institutions
- transport interchange facilities, including bus stops and rail stations
- future development sites and planned transport links

5.11 For larger geographical areas it may be decided only to include the most significant trip generators; for example, larger employment sites or shopping areas.

5.12 Once existing and future origin and destination points have been mapped, it is recommended that trip generators in close proximity to each other are clustered to simplify the analysis. Where this is done, it will be important to ensure that links between the trip generators within a cluster are also considered (**Figure 7**).

Figure 7: Clustering of Origin and Destination Points Corridors

Identifying Desire Lines

5.13 Once the most significant trip origin and destination points have been mapped, direct desire lines should be plotted between them to identify the principal to be provided by the cycle network. Desire lines are indicative links between origin and destination points and do not, at this stage, need to link to existing roads or cycle routes.

5.14 A high-level assessment of the number of cycle trips along each desire line sould be undertaken, based on existing data and local knowledge. This should take into consideration both current levels of cycling between the origin and destination points, as well as potential future demand. Demand can be represented by using varying thicknesses of desire line, either schematically or generated by actual data on a GIS map.

5.15 Identifying desire lines and forecasting future commuter cycle flows can be easily done using the Propensity to Cycle Tool (PCT). The PCT, however, is based on travel to work data from the 2011 Census and therefore desire lines linked to other trip generators, such as schools and leisure facilities, are not included and will need to be mapped separately. Desire lines linked to new development sites since 2011, or those planned for the future, will also need to be mapped separately.

5.16 Further verification of principal desire lines for cycling can be obtained when the map is discussed with internal and external stakeholders to obtain their views, ensuring that all relevant information has been considered.

Classification of Desire Lines

5.17 The importance of each desire line needs to be understood in terms of their overall significance in the network and will largely relate to the numbers of cyclists they will need to cater for in future.

5.18 It is suggested that the following classification is applied to categorise the desire lines:

- **Primary**: High flows of cyclists are forecast along desire lines that link large residential areas to trip attractors such as a town or city centre.
- **Secondary**: Medium flows of cyclists are forecast along desire lines that link to trip attractors such as schools, colleges and employment sites.
- **Local**: Lower flows of cyclists are forecast along desire lines that cater for local cycle trips, often providing links to primary or secondary desire lines.

Network Density

5.19 When mapping desire lines, the density of the future network should be considered and will be related to the density of land use. In a joined-up urban cycle network, cyclists should typically not have to travel more than 400m to get between cycle routes of similar quality.

5.20 This attribute of a cycle network is known as ‘mesh density’ and describes whether the grid of cycle routes is tighter (with more route choice) or looser (less extensive).

5.21 It is acknowledged that it will take time to develop a network with a tight density, and wider mesh widths of up to 1000m would be expected within the initial phases of the

network's development. In smaller towns and in rural areas, where origins and destinations are more dispersed, using mesh density is less relevant.

5.22 Further information about how to determine network density can be found in the TfL London Cycling Design Standards[4].

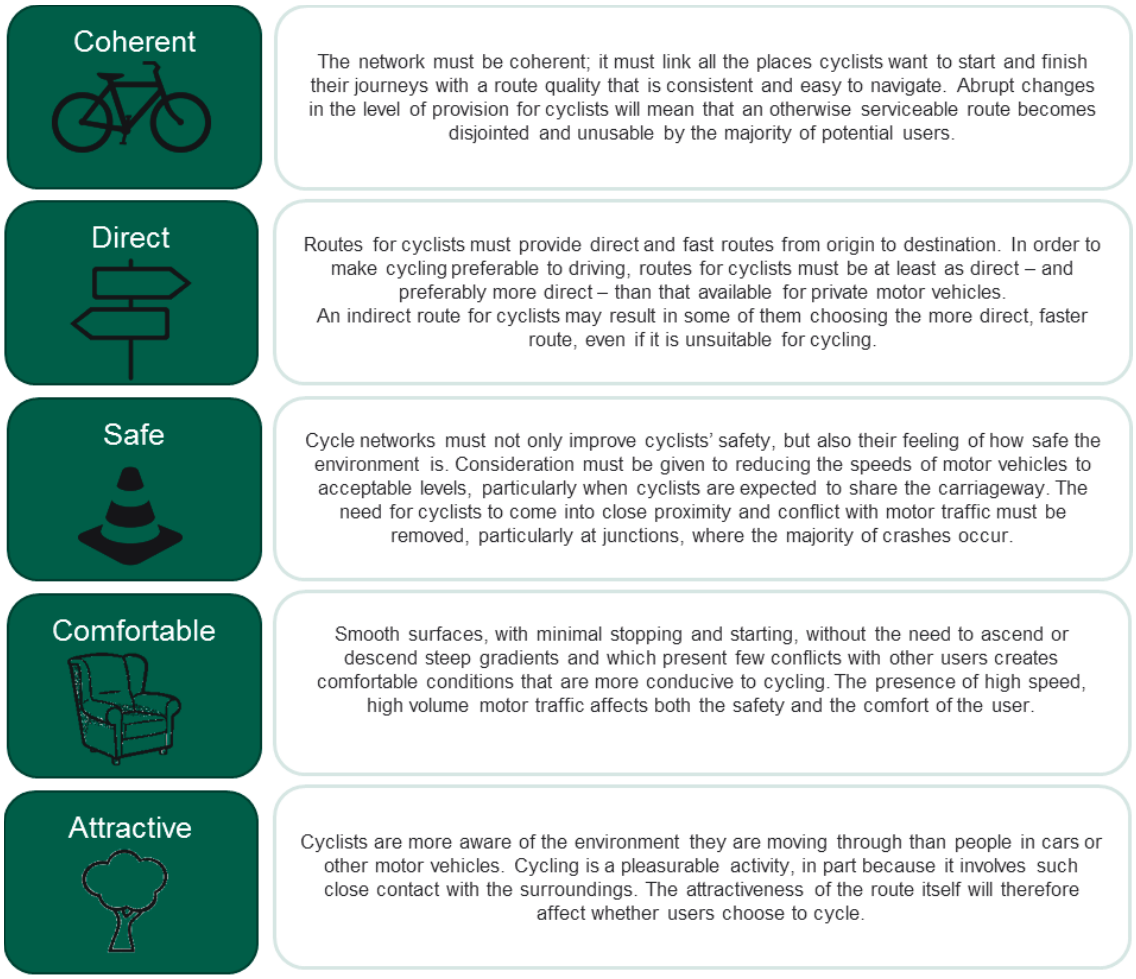
Core Design Outcomes for Cycle Routes

5.23 When converting desire lines into preferred routes to create a cycle network, it is important to consider the attributes of the existing transport network and its suitability for cycling. Based on established practice both internationally[5] and nationally[6], good routes for cycling should achieve the core design outcomes of being coherent, direct, safe, comfortable and attractive.

5.24 These five core outcomes underpin the Cycling Level of Service (CLoS) tool in the London Cycling Design Standards, and the level of service tool which is provided in the Wales Active Travel Design Guidance.

5.25 Further information about the core design outcomes for cycling can be found in **Figure 8**.

Figure 8: Core Design Outcomes for Cycling



[4] https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit#on-this-page-1
[5] Dutch Design Manual for bicycle traffic (CROW): http://www.crow.nl/publicaties/design-manual-for-bicycle-traffic
[6] TfL research points to safety, traffic and facilities being key barriers http://content.tfl.gov.uk/analysis-of-cycling-potential.pdf

Route Selection Process

5.26 Converting desire lines into routes for inclusion in LCWIPs is an iterative process, and is one of the most important elements of the LCWIP process.

5.27 In most cases, there will be a clear preferred cycle route, which is usually the most direct. However, in some cases there may be more than one potential route between origin and destination points or a reason why the most direct route is not suitable for cycling.

5.28 Once a preferred route has been identified, it should be assessed against the core design outcomes and its ability to cater for the anticipated levels of cycling. If a route is not suitable in its present condition, a preliminary audit should be undertaken to identify what measures are required to improve it. If it is not possible to improve the preferred route to an acceptable level, due to physical constraints or operational requirements, such as junction capacities and kerbside activities, then the next most direct route should be assessed.

5.29 There will always be conflicting demands when it comes to selecting routes. As such, it is important that the needs of all users are considered when selecting routes, and that the wider transport priorities for specific roads, junctions and spaces are understood in unison. Both the wider opportunities and challenges of selecting particular routes should also be considered, with important direct routes only being replaced with an alternative route in exceptional circumstances.

5.30 The PCT can be used to assign trips from desire lines to ‘fastest’ and ‘quietest’ routes automatically; however, the PCT assignment does need to be checked against local conditions and constraints which are not taken into consideration by the tool.

Route Selection Tool

5.31 To help assess and compare potential routes for inclusion in the network, a Route Selection Tool (RST) has been developed.

5.32 The primary function of the tool is to assess the suitability of a route in its existing condition against the core design outcomes and then compare it with the potential future state, if improvements were made. It also enables the merits of alternative routes to be easily compared.

5.33 It is not envisaged that this will be used for every route, but it may help to make the case for the more important or challenging routes where a range of options may need to be assessed.

Route Selection Tool Criteria

5.34 The RST uses a range of criteria to assess how well a route meets the core design outcomes for cycling ranging from 5, being the highest, to 0, being the lowest. The criteria are:

- directness
- gradient
- safety
- connectivity

- comfort

5.35 The number of ‘critical junctions’ are also recorded to enable a high-level evaluation of both links and junctions within one tool. A ‘critical junction’ is defined as one that has characteristics that are hazardous for cyclists e.g. high traffic volumes, lack of priority or segregation, crossing high speed on-off slip roads or large roundabouts.

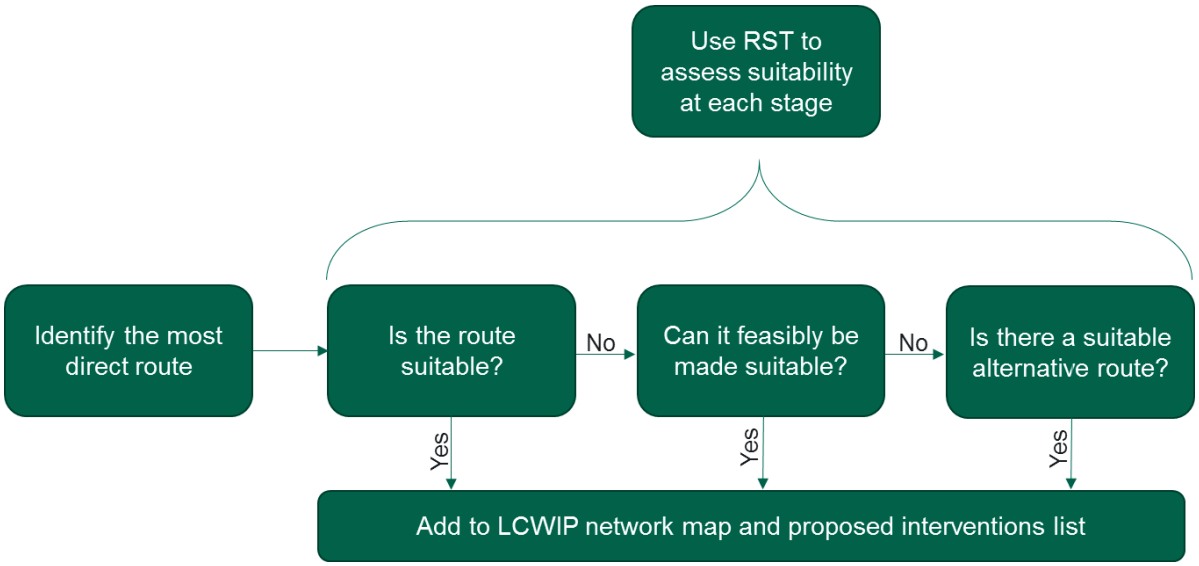
5.36 Gradient has been added as it is an important factor in the choices that cyclists make when considering route options.

5.37 Attractiveness is not included in the RST as it is not deemed to be a key deciding factor between routes, however clearly attractiveness should be considered where leisure is an important journey purpose.

5.38 Where possible, local user views should be sought to supplement site observations and ensure the best possible routes and solutions are identified.

5.39 The process to follow when using the tool is shown in **Figure 9**. Further details of the RST and guidance on using the tool can be found in **Annex B**.

Figure 9: Route Selection Process



Barrier Treatments and Area Porosity

5.40 As well as the key routes that join origin and destination points, there is a wider network of quiet streets, country lanes and public rights of way that provide important local links. While it can be assumed that conditions generally are acceptable for cycling due to lower speeds and volumes of motor traffic, some routes will require infrastructure improvements. For example at junctions with busy roads, or to cross physical barriers such as rivers, canals and railway lines.

5.41 Assessing the number of access points to these areas is referred to in the London Cycling Design Standards as ‘Area Porosity Analysis’, since improved access points increase the ‘porosity’ of the area.

5.42 If any improvements to increase the ‘porosity’ of the area are identified, such as junction improvements or crossings, these should be added to the LCWIP programme of planned improvements.

5.43 More information about Area Porosity Analysis can be found in the TfL London Cycling Design Standards[7].

Establishing Cycling Infrastructure Improvements

5.44 Infrastructure improvements will largely fall into two categories – improvements to existing facilities or the provision of a new route. They can also be broadly categorised into those that will benefit just cycling and those that have a benefit for other users – for example, implementing wider traffic management measures.

5.45 To determine the scale of costs and the deliverability of proposed improvements, some conceptual design ideas will be required. The level of detail required will depend on the complexity and nature of the route; however, identifying an outline scope and cost estimates for improvements will assist with the appraisal and prioritisation process.

5.46 The requirements for signage or wayfinding information, cycle parking, automatic cycle counters and maintenance stands should also be considered as part of the supporting infrastructure for the route network, and be included in the programme.

The Cycle City Ambition Grant programme has recently provided some information about the typical costs associated with different types of infrastructure. These are detailed in **Figure 10**.

Figure 10: Indicative Costs of Cycling Infrastructure at 2014-15 Prices[8].

Scheme Type	Range of Costs	
Cycle Superhighway	£1.15-1.45m/km £0.74m/km	two-way physically segregated two-way light segregated
Mixed Strategic Cycle Route	£0.46-0.88m/km	
Resurfaced Cycle Route	£0.14-0.19m/km	canalside routes
Cycle Bridge	£0.10-0.50m/km	bridge upgrades not whole new bridges
20 mph zone	£10,000-15,000/km £2,000-3,000/km	including traffic calming measures without any traffic calming measures
Remodelled major junction	£1.56-1.61m £0.24m	cycling-specific schemes cycling piggybacking on traffic measures
Cycle crossing at major road	£0.14-0.41m	
Area-wide workplace cycle facilities	£0.20-0.75m £6,000-7,000	programme cost cost per workplace grant
Area-wide school and college cycle facilities	£0.22-1.16m £8,000-110,000	programme cost cost per school
Large-scale cycle parking	£2.5m £0.12-0.70m	for a very large bike park for 3,000 bikes for secure bike parks for 10-1000+ bikes, including changing and showers at the largest
Large-scale provision of bicycles	£1.41m £350	programme cost cost per bike provided
Comprehensive cycle route signage	£6,000/km	
Automatic cycle counters	£28,000 £6,000	programme cost for one cross-city route cost per counter

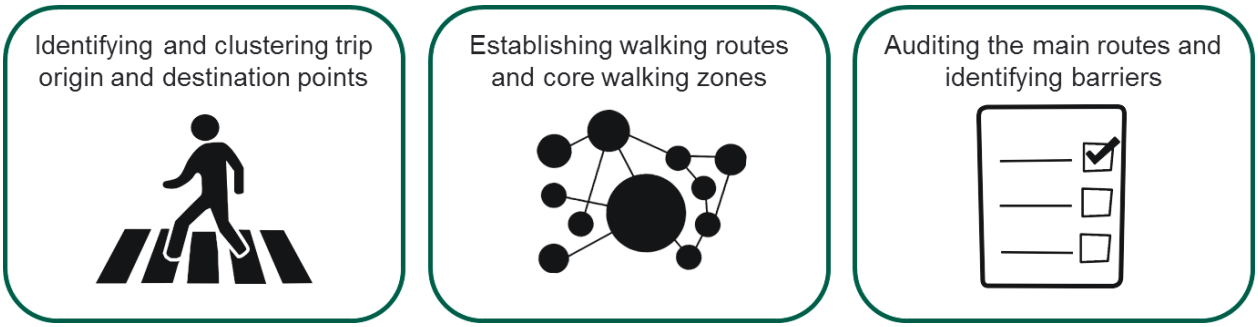
[7] https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit#on-this-page-1

[8] Typical Costs of Cycling Interventions, An Interim Analysis of Cycle City Ambition Schemes, transport for Quality of Life (report for DfT), December 2016

6. Network Planning for Walking – Stage 4

Stage Summary

6.1 The fourth stage of the LCWIP process sets out the recommended steps for mapping a future walking network and identifying infrastructure improvements. It involves:



6.2 The key output of this stage should be a proposed future **Walking Network Map,** detailing preferred walking routes and core walking zones for further development.

6.3 Where the routes and zones identified on the map are not of a sufficient quality to meet the needs of people who would wish to travel by foot, a **Programme of Walking Infrastructure Improvements** will need to be identified.

6.4 This stage is intended for areas where little strategic planning has been undertaken for walking. If an authority has already developed a long-term walking network plan, the tools and techniques outlined in this stage could be used to validate it or enhance a programme of investments.

6.5 As the **Walking Network Map** and **Programme of Walking Infrastructure Improvements** are the key outputs of the LCWIP process it is important that they are shared with the Senior Responsible Owner, members of the Project Board, and the appropriate relevant stakeholders. Time should be taken to collect the views of all parties who may be interested or impacted by the proposed network, with the opportunity given for people to express their views.

6.6 In most places a comprehensive network, which accommodates most pedestrian trips, already exists. Although routes may exist, people may be deterred from using them due to severance issues, such as the need to cross roads, or because the facilities are poorly designed or maintained.

6.7 The main focus of the LCWIP is therefore to improve, and in some cases extend, the existing walking network in order to encourage people to make more short trips on foot.

Walking Network Map and Programme of Walking Infrastructure Improvements

6.8 The Walking Network Map and the Programme of Walking Infrastructure Improvements are both strategic planning documents.

6.9 A Walking Network Map provides a high level overview of the preferred routes and zones for further investigation and development, while a Programme of Walking Infrastructure Improvements summarises the improvements that are required in order for routes within the network to achieve a suitable standard.

6.10 Both should be completed in sufficient detail to enable an indicative scope of works to be defined.

Mapping Walking Trip Generators

6.11 Understanding demand for a planned network should start by mapping the main origin and destination points across the geographical area covered by the LCWIP. This should preferably be done using a GIS system.

6.12 Utility trips typically have common journey destinations, such as town and city centres, educational establishments, workplaces, health, leisure and other facilities. This guidance therefore outlines a methodology that focuses on pedestrian infrastructure improvements around these walking trip attractors and the routes that lead to them.

6.13 The list below provides a guide to the types of local amenities that could be expected to attract a significant number of pedestrian trips:

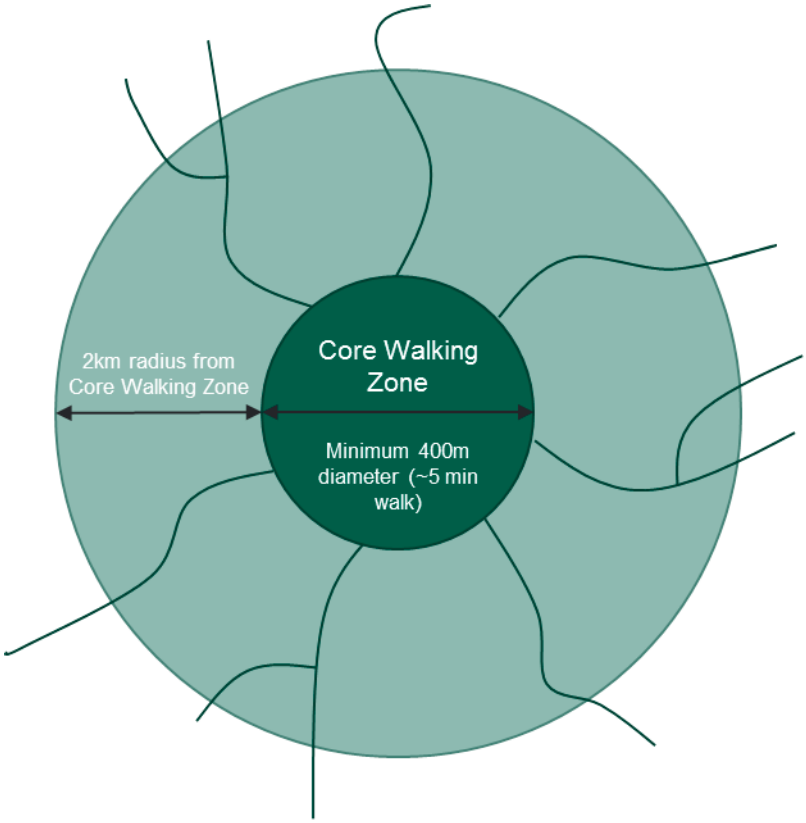
- city, town and district centres
- employment areas or large individual employers, commercial core areas, office and business parks
- educational establishments, including primary schools, secondary schools, colleges and university campuses
- healthcare establishments, including hospitals, health centres and doctors' surgeries
- retail facilities, including local retail centres, district retail centres, shopping parades/malls, supermarkets and retail parks
- community facilities and leisure venues, including libraries, sports stadia, performance arenas, visitor attractions, leisure centres, post offices, parks, places of worship and cultural institutions
- transport interchange facilities, including bus stops, rail stations
- future development sites and planned transport links

Identifying Core Walking Zones

6.14 Once the walking trip generators have been identified, Core Walking Zones (CWZs) can be defined. CWZs normally consist of a number of walking trip generators that are located close together - such as a town centre or business parks.

6.15 An approximate five minute walking distance of 400m can be used as a guide to the minimum extents of CWZs (**Figure 11**). Within CWZs, all of the pedestrian infrastructure should be deemed to be important.

Figure 11: Core Walking Zones and Key Walking Routes



Identifying Key Walking Routes

6.16 Once the CWZs have been identified, the important pedestrian routes that serve them from a distance of up to around 2km should be located and mapped.

6.17 Compared to cycling, there are generally already high levels of walking in many places, and so data on current demand provides a good basis on which to identify key walking routes.

6.18 Many authorities already have maintenance regimes that define which pedestrian infrastructure is most important – for example the Footway Maintenance Classification[9] (**Figure 12**). Where this is the case, authorities may wish to start with the highest category footways to define the key walking routes.

6.19 TfL has published guidance on the acceptable levels of pedestrian density on footways, referred to as the Pedestrian Comfort Level (PCL)[10]. It uses a place categorisation, such as a High Street or Transport Interchange, to assess the comfort of the pedestrian environment in terms of capacity and identify key walking routes for improvement. More information about Pedestrian Comfort Guidance can be found on TfL's website .

[9] Well-maintained Highways: Code of Practice for Highway Maintenance Management 2005 Edition, updated September 2013, Roads Liaison Group – London: TSO
[10] Pedestrian Comfort Level for London Guidance Document, TfL 2010 – TfL, London

Figure 12: Footway Hierarchy in 'Well-Maintained' Highways

Category	Name	Description
1(a)	**Prestige Walking Zones**	Very busy areas of towns and cities, with high public space and street scene contribution.
1	**Primary Walking Routes**	Busy urban shopping and business areas, and main pedestrian routes.
2	**Secondary Walking Routes**	Medium usage routes through local areas feeding into primary routes, local shopping centres, etc.
3	**Link Footways**	Linking local access footways through urban areas and busy rural footways.
4	**Local Access Footways**	Footways associated with low usage, short estate roads to the main roads and cul-de-sacs.

Identify Barriers and Funnel Routes

6.20 Severance associated with the landform or layout of a settlement often create funnel routes with high pedestrian flows due to the lack of alternatives.

6.21 Barriers include rivers, canals, railway lines and heavily-trafficked roads with a limited number of crossing points. Other barriers could include residential and industrial estates with poor permeability for pedestrians.

6.22 Funnel routes can often be identified by undertaking a desktop exercise using aerial imagery and other mapping. Engagement with the public can also help identify barriers and funnel routes.

6.23 The most direct route which experiences severance, as well as the routes people are 'funnelled' towards should be audited when developing walking network maps. This will establish whether the most direct route can be treated to amend the severance experienced.

Auditing Key Walking Routes and Core Walking Zones

6.24 An important part of the process is to audit the existing walking infrastructure to determine where improvements are needed. Sufficient detail is required to enable the scope and indicative cost to be estimated.

6.25 The audit process can be customised to local situations, considering the nature and scale of improvements that an authority wishes to include in the LCWIP, and the resources they have available to carry out the work.

6.26 Potential methodologies for auditing walking infrastructure range from detailed street audits to surveys that only consider specific aspects of the infrastructure, such as footway condition surveys. For all methods, local knowledge is a crucial input and views should be sought from local stakeholders.

6.27 As part of the Welsh Active Travel Design Guidance[11] a Walking Route Audit Tool (WRAT) was developed to assist Local Authorities with the auditing of walking routes. The auditing methodology targets the five core design outcomes for pedestrian infrastructure, which are similar to those for cycling.

[11] www.gov.wales

6.28 These are:

- attractiveness
- comfort
- directness
- safety
- coherence

6.29 The assessment needs to consider the needs of vulnerable pedestrians who may be: older; visually impaired; mobility impaired; hearing impaired; with learning difficulties; buggy users, or children. It may be useful to undertake a pilot street audit with representatives from various user groups, including disabled people.

6.30 Further information about the WRAT can be found in **Annex C**.

Establishing Walking Infrastructure Improvements

6.31 Auditing will enable authorities to identify where improvements to pedestrian infrastructure are required. Schemes identified will broadly fall into two categories – improvements to existing infrastructure, and the introduction of a new route.

6.32 Analysis of barriers, particularly from the funnel routes analysis, can highlight where facilities such as new crossing points and bridges could potentially release suppressed demand.

6.33 Improvements that can potentially be implemented to address existing deficiencies may include the following:

- new walking links
- additional pedestrian crossings
- improving existing pedestrian crossing facilities, e.g. crossing width, introducing refuges, reducing waiting times, and/or increasing crossing times
- replacing broken/uneven/rocking paviours
- resurfacing footways
- improving street lighting
- providing CCTV security cameras
- increasing pedestrian capacity (Pedestrian Comfort Levels) by widening footways and/or reallocation of carriageway space
- removing street clutter
- reducing traffic speeds, e.g. by introducing 20mph limits/zones and providing traffic calming features
- providing dropped kerbs and tactile paving
- improving signage and wayfinding
- improving planting, shade and shelter
- improving seating facilities to enable people to rest
- general improvements to the public realm, encompassing some or all of the above

6.34 Where several minor improvements have been identified in the same area or route, schemes can be amalgamated into a package of works, to ensure that individual measures are implemented together and achieve complementary benefits and synergies.

7. Prioritising Improvements – Stage 5

Stage Summary

7.1 The fifth stage of the LCWIP process sets out a suggested approach to prioritising walking and cycling infrastructure improvements, in the short, medium and long term. It involves:

7.2 The key output of this stage should be a joint **prioritised programme of cycling and walking infrastructure improvements**.

7.3 This is a key output of the LCWIP process and should be shared with the Senior Responsible Owner, members of the Project Board, and the appropriate relevant stakeholders. Time should be taken to collect the views of all parties who may be interested or impacted, with the opportunity given for people to express their views.

Prioritisation

7.4 It is recommended that infrastructure improvements are prioritised into three categories:

- **Short term** (typically <3 years) – improvements which can be implemented quickly or are under development
- **Medium term** (typically <5 years) – improvements where there is a clear intention to act, but delivery is dependent on further funding availability or other issues (e.g. detailed design, securing planning permissions, land acquisition)
- **Long term** (typically >5 years) – more aspirational improvements or those awaiting a defined solution

7.5 The time periods may vary from authority to authority depending on how the LCWIP links to existing planning documents or funding streams. For example, the authority may decide to align the LCWIP timescale to a Local Transport Plan or to the duration of a current Government funding round.

7.6 Priority should normally be given to improvements that are most likely to have the greatest impact on increasing the number of people who choose to walk and cycle,

and therefore provide the greatest return on investment. Evidence of the benefits of these early schemes will also strengthen the case for further investment.

7.7 Other factors may also influence the prioritisation of improvements; such as the deliverability of the proposed works or opportunities to link with other highway schemes.

7.8 Prioritisation should consider the complete package of improvements that is required to bring a route or zone up to standard, or smaller scale measures that together form a coherent package. Individual improvements can be considered if they will deliver significant benefits – for example, where a junction improvement deals with a significant severance issue.

7.9 When prioritising infrastructure improvements, typical factors that may be considered by authorities include:

Effectiveness

- the forecast increase in the number of walking and cycling trips
- the population who directly benefit from the intervention
- the degree of deficiency of the existing infrastructure
- contribution of the scheme to the overall network development
- improvement in road safety
- air quality impact
- impact on other users
- integration with other schemes

Policy

- delivery against policy objectives, such as improvements to health and inclusion
- importance of the intervention for particular target user groups, e.g. people without access to a car/van, or with higher levels of poor health
- classification by type of journey, e.g. education, workplace, utility, recreation, to aid alignment with particular funding streams
- performance against local transport plans/local plan policies
- priority/importance of the intervention as defined through the engagement process

Deliverability

- scheme feasibility/deliverability
- public acceptability
- dependency on other schemes
- environmental constraints, e.g. conservation areas

7.10 An example of how to consider these factors in a prioritisation table is shown in **Figure 13**.

Figure 13: Example Prioritisation Table

Scheme Description					Effectiveness			Policy			Economic			Deliverability			Prioritisation	
Ref.	Route	Section	Description	Cost	Forecast increase in walking and cycling trips	Population who directly benefit from the intervention	Improvement in road safety	Delivery against policy objectives	Performance against local transport plan	Importance of the intervention for particular user groups	Costs of construction and maintenance	Value for Money – using Cost Benefit Analysis	Potential to attract funding, including private sector funding	Scheme feasibility	Dependency on other scheme	Political acceptability	Total score	Ranking
NW1	Northern corridor (from x to y)	Section A – from town centre to university	Implementation of segregated bi-directional cycle track for 2km	£2,000,000	1	3	2	3	2	2	2	2	1	1	2	2	21	3
NW2	Northern corridor (from x to y)	Section B – from university to park	Mandatory cycle lance on both side of carriage way, carriage way resurfacing	£250,000	2	2	2	3	1	3	0	0	0	2	2	2	19	2
NW3	Southern corridor	Whole route	Quiet route, cycle symbols and wayfinding only	£75,000	3	1	3	3	0	1	0	2	2	0	2	1	18	1

Appraisal

7.11 When preparing the business case or bid for proposed improvements, an appraisal of their value for money is likely to be required. For the purpose of prioritisation, an indicative appraisal will help identify which improvements will be more likely than others to present high value for money.

7.12 Understanding the likely value for money, and what factors might influence this, can also be useful in further refining proposals, in order to improve their overall effectiveness. Similarly, early analysis will also highlight areas where more effort at establishing evidence could be helpful.

7.13 Detailed guidance on how to appraise proposals is contained in WebTAG unit A5-1[12]. An overview of the appraisal process, together with a summary of previously assessed schemes, and a step-by-step worked example, is contained in the Department's 'Investing in Cycling and Walking' report[13]. A worked example is also provided in the form of a spreadsheet model that can easily be adapted to obtain an estimated benefit cost ratio (BCR) for new proposals[14].

7.14 The data required for appraisal includes:

- the likely number of users – both existing users and the potential increase in usage after implementation
- an outline of the type of improvement planned
- the likely delivery and maintenance costs

7.15 The tool's flexibility allows for testing various assumptions and their impacts on the BCR. This provides an understanding of which variables are the key drivers of value. It also facilitates the comparison of a range of different options.

[12] https://www.gov.uk/government/publications/webtag-tag-unit-a5-1-active-mode-appraisal
[13] Available from https://www.gov.uk/government/publications/cycling-and-walking-the-economic-case-for-action
[14] At the same website as the report

7.16 The tool is set up to calculate the likely:

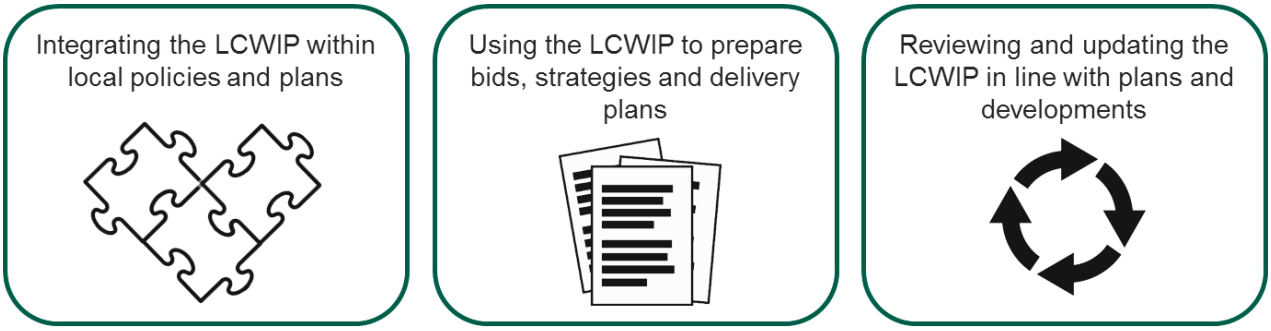
- health and absenteeism benefits
- journey quality improvements
- decongestion benefits (including environmental) from mode shift

7.17 It also creates an 'analysis of monetised costs and benefits table' (AMCB), as well as the net present value (NPV) and BCR.

8. Integration and Application – Stage 6

Stage Summary

8.1 The final stage of the LCWIP process considers how the LCWIP should be integrated into local policy, strategies and plans, as well as possible practical applications of the outputs from the LCWIPs. It involves:



Embedding the LCWIP

8.2 It is likely that the approach to embedding and applying LCWIPs will vary, depending on local circumstances.

8.3 In all cases, there should be a clear link between the LCWIPs and other strategic transport planning documents, such as Local Transport Plans or local walking or cycling strategies.

8.4 Consideration should also be given to incorporating LCWIPs into Supplementary Planning Documents where this would build on the policies in the Local Plan. Local Authorities may also wish to refer to LCWIPs in Area Action Plans and Neighbourhood Plans.

8.5 LCWIPs will assist LAs to ensure that consideration is given to cycling and walking within both local planning and transport policies, strategies and delivery plans. They will also help to make the case for future funding for walking and cycling infrastructure.

8.6 Some suggested applications of the LCWIPs include:

- preparation of funding bids or business cases for future investment
- preparation of walking and cycling strategies and action plans
- allocation of funding within local delivery plans
- preparation of Neighbourhood Plans
- cycle and walking 'proofing' of major schemes
- consideration of planning applications and other proposed land use changes

- preparation of Travel Plans, Transport Assessments and Statements

Reviewing and Updating

8.7 In line with other transport plans, it is envisaged that the LCWIP will need to be reviewed and updated approximately every four to five years to reflect progress made with implementation. LCWIPs should also be updated if there are significant changes in local circumstances, such as the publication of new policies or strategies, major new development sites, or new sources of funding.

9. Glossary

GLOSSARY OF TERMS AND ABBREVIATIONS

AMCB	Analysis of Monetised Costs and Benefits
AAP	Area Action Plan
BCR	Benefit Cost Ratio
CA	Combined Authority
CLoS	Cycling Level of Service tool
The Strategy / CWIS	Cycling and Walking Investment Strategy
CROW	Countryside and Rights of Way Act 2000
CWZ	Core Walking Zone
GIS	Geographic Information System
GVA	Gross Value Added
LA	Local Authority
LCWIP	Local Cycling and Walking Infrastructure Plan
LEP	Local Enterprise Partnership
LHA	Local Highway Authority
LPA	Local Planning Authority
LSOA	Lower Layer Super Output Area of UK census output
LTA	Local Transport Authority
MSOA	Medium Layer Super Output Area of UK census output
NP	Neighbourhood Plan
NPPF	National Planning Policy Framework
NPV	Net Present Value
PCL	Pedestrian Comfort Level
PCT	Propensity to Cycle Tool
ROWIP	Rights of Way Improvement Plan
RST	Route Selection Tool
SPD	Supplementary Planning Document
TTWA	Travel to Work Area
WRAT	Walking Route Audit Tool