A quick reference guide to supplement The Royal Parks Walking and Cycling Technical Design Guidance first published in 2016. The main guidance document should be referred to for detailed design advice. This document summarises our recommended approach and tools for planning and designing walking and cycling related infrastructure in busy parkland settings.
Pedestrians comprise the majority of visitors across the parks, but with many other users including cyclists, provision for all visitors needs to be balanced to maintain a high quality of experience. Walking is permitted in all areas of the parks except operational areas, areas licenced to others and nature conservation enclosures. Cycling is allowed on all roads and some specially designated cycle routes within the eight parks and Brompton Cemetery. The parks provide fantastic ‘green’ routes in London, taking walkers and cyclists away from traffic and through some of the most attractive areas of the capital. There are 28 miles of cycle routes and 32 miles of roads to cycle on in the parks, with many of the routes linking in with the wider London Cycle Network.

WHY DO WE NEED A DESIGN GUIDE?
The Royal Parks Walking and Cycling Technical Design Guidance (2016) was produced after more than 10 years of research and observation, monitoring the changing relationship of walking and cycling in London’s Royal Parks. Existing urban design best practice for walking and cycling primarily relates to road environments, and so this guidance looks to bridge a knowledge gap by focusing on parkland settings. It sets out a robust evidence based planning approach to promote a consistency of high quality parkland design.

There has been a significant increase in the popularity of cycling in the capital, with a growing pressure on parks to accommodate both more cycling and walking. It is anticipated that there will be further increases in walking and cycling in London based on the continuing trend for Government and Mayoral Strategies to support active modes. The Royal Parks has developed a process to make sure that any intervention scheme is considered holistically and maintains a high quality of provision for visitors, and that interested parties and stakeholders participate in the process. It is hoped that this sharing of research and experience will help other parks professionals make informed decisions about walking and cycling initiatives.

WALKING
Over 90% of the 80 million visits to the Royal Parks are enjoyed on foot and this has significantly increased over the past few years. Walking activities within the parks are undertaken for a multitude of reasons; as an important part of people’s health and wellbeing, as well as providing for national and international tourism.

Increasing visitor numbers over recent years is, however, putting pressure on the fabric of the parks, Providing facilities in different areas of the parks helps spread the concentration of usage and using high quality materials and sufficient paths or hard standing areas in popular locations helps reduce the maintenance burden.

It is recognised that there are some challenges associated with ensuring inclusive and accessible parkland environments; many of these issues centre on providing safe access to the parks, particularly for more vulnerable visitors looking to cross park roads or cycle routes. Studies have shown that some visitors consider these as barriers to enjoying the parks, but that providing access points that feel safe, are signed well and convenient can encourage greater use and inclusivity. The provision of toilets, benches, refreshment facilities and a good path network also encourage use as they provide resting opportunities, focal points (for orientation), gathering areas and service basic needs. Partnering with other authorities to provide good wayfinding such as Legible London, guided walks, sponsored walks campaigns and podcasts also help encourage walking journeys and enjoyment of the parks.

CYCLING
Infrastructure improvements that are sensitive to the parkland setting can be an effective way to enhance the experience and enjoyment of the parks for all visitors. The design guide sets out how to ensure that a scheme proposal is fit for purpose and appropriate for the context. For example any proposal to open up a shared cycle route must go through a rigorous process of objective analysis and consideration.

The Royal Parks changed park regulations by an Act of Parliament in 1983 to permit cycling in the parks on designated routes. This was devised at a time when there were relatively low cyclist and visitor numbers. With the recent growth in cycling and renaissance in the use of parks and open spaces in general, there is an ongoing challenge to help visitors get along and not impinge on the enjoyment of others. The Metropolitan Police and other interest groups report that poor cycling behaviour and high numbers of cyclists can cause discomfort to other visitors. We therefore encourage considerate cycling to ensure a healthy respect for fellow park visitors and the wildlife.

Issues associated with cycling and dog walking are the most common concerns raised in various stakeholder forums and through correspondence with the public and local groups including the Friends of the Parks. Cyclists and cycle lobby groups regularly request more cycling facilities within the parks to provide more convenient routing and help makes their journeys quicker. Sports cyclists enjoy using the parks and ask for interventions that will enable them to train more frequently and in a safer environment. The Royal Parks aims to maintain the integrity and quality of the parkland environment and this guidance looks to provide support in managing these challenges.
OTHER USERS
There are other regular park users that need to be considered within the design of the parks including horse riders; rollerbladers; runners; joggers; scooter users; carers with prams/buggies. Projects are informed by Equality Impact Assessments and specific guidance from user groups through The Royal Parks Diversity Network to ensure that people with disabilities or vulnerable users are considered. Other stakeholder groups are used to consult on proposals so that views are taken into consideration and improvements delivered across the parks.

There are many interventions that have to be carefully balanced such as the presumption that signage should be kept to a minimum to respect the beauty of the historic significant landscapes, and selecting surface materials that assist pedestrians with visual impairments, while maintaining the visual and historic character of the parks.

The Royal Parks therefore advocates utilising the processes outlined in this design guidance to take a holistic approach in making a balanced decision on a case by case basis.

SHARED USE APPROACH
The Royal Parks contain areas where routes are ‘shared use’, generally referring to places that visitors using different modes of transport come together. ‘Shared use’ is the preferred approach for enabling cycling on appropriate park paths. Not all paths are suitable for cycling as some paths may already be heavily used by pedestrians and offer insufficient capacity for safe cycling, paths may link to busy or hazardous junctions, or the alignment may be of historic significance that would be adversely impacted on by cycling.

Across all shared use areas, the path design and layout needs to maintain pedestrian priority and enhance awareness between different users. Shared paths are signposted at the start of the route, as well as where pedestrian only paths intersect the shared use cycle route. Signage is kept to a minimum to reduce clutter.

Pedestrians and cyclists sharing the full width of the path, with no white line delineation, is the preferred approach for providing for cycling across paths within the Royal Parks. It has been shown in several recent studies, that a shared use area with no separation of modes is more conducive to considerate cycling, promoting lower cycling speeds. Interactions between pedestrians and cyclists travelling at lower speeds provide greater safety and comfort benefits for all users.

Shared use cycle routes are already used in many parts of the parks as segregated lanes delineated with a white line are often not recognised by dogs and vulnerable users including young children or those with visual impairments.

SHARED USE PATCH
Cyclists and pedestrians share the full width of the path. Appropriate in suitable locations across the Royal Parks

- Contributes towards high levels of pedestrian comfort as people are able to use the full width of the path.
- Cyclists ride at a considerate speed and give way to pedestrians.

SEGREGATION WITH WHITE LINE

- Pedestrians and cyclists have no highway style markings to conform to and can enjoy the parkland environment.
- Commuter cyclists may become frustrated that the path does not enable high riding speeds during busy times.
- Cyclists ride at a very high speed and incorrectly assume priority over pedestrians.

- Creates low levels of pedestrian comfort as people are forced to use a more constrained area of path.
- Some pedestrians do not understand or notice the white line and walk across the full width of the path.
- People feel constrained as there are high pedestrian flows and knowingly choose to walk across the full width of the path.
The following section summarises the approach recommended by The Royal Parks for making decisions on planning and design of walking and cycling infrastructure. Please refer to Chapter 2 of the main guidance document: The Royal Parks Walking and Cycling Technical Design Guidance, for additional details.

This summary document comprises:
- Key Design Principles
- Pedestrian & Cyclist Design Requirements
- Key Design Features
- The Seven Stage Delivery Process
- Path Typologies Approach
- Path Design Checklist
- Shared Use Routes Criteria for Success

**Key Design Principles**

The design of any path should conform to the following principles that set out fundamental considerations and priorities for ensuring that designs are appropriate for the context of the parks.

- **Landscape Character**
  - The Royal Parks advocates maintaining the existing character of the parkland landscape as a priority by using materials that are visually sympathetic to the setting.

- **Visitor Safety**
  - Visitor safety is of the highest priority. Designers Risk Assessments (DRAs) are also produced during the development of cycling and accessibility projects. These audits mean that throughout the design, construction and ongoing management/maintenance process, safety is considered. Actions are taken through the process to mitigate, remove or reduce risk of incidents.

- **Pedestrian Priority**
  - Infrastructure should enable pedestrian priority without being overly engineered or prescriptive.

- **Inclusive Design**
  - Facilities should enable all users to have a safe and enjoyable experience in the parks, by considering vulnerable users including the elderly and children throughout the design development process, and by protecting disabled peoples’ equitable rights through inclusive design.

- **‘Tarmac Neutral’**
  - There is a presumption against any additional ‘hard’ paths being constructed unless the proportions between hard and soft landscaping across the park remain the same.

- **Historic Alignments**
  - Historic path alignments are to be preserved where designated as an important part of the park character. These alignments are listed in the Park Management Plans.

- **Fit for Purpose**
  - Paths should be continually reviewed to ensure that they are fit for purpose and appropriate for the level of demand.

- **Sustainable Construction**
  - Construction should ensure adequate drainage, with materials carefully selected so they do not add nutrients or impact on the pH balance of the surrounding soil. Construction processes are to be managed to minimise disruption of ecosystem services.
DESIGN SPEEDS
A number of studies have been conducted that look to assess pedestrian average walking speeds; 1.2 metres per second being the most frequently cited (TRL, 2014: A Review of pedestrian walking speeds). However many older people are not able to walk at 1.2m/s, and it has been observed that people strolling in the parks generally walk at a much slower speed. This is important for a number of design considerations, including:

- The design of signal timings at formal pedestrian crossings.
- The design of shared use areas where cyclists are passing pedestrians.
- The holding capacity of formal paths, as slower walking speeds inherently result in increased dwell time.

Cyclists’ travel speeds are much more variable, based on trip purpose, bicycle type, path width and design etc. Surface conditions have a significant impact on cycling speeds and manoeuvring. Path width and segregation design can also have a major impact on cycling speeds.

The Royal Parks advocates a design speed for shared use paths of 8–12mph. For roads, design speeds should be appropriate for the designated speed limit. This will impact on the choice of surface material and the delineation of shared/segregated routes.

PEDESTRIAN COMFORT GUIDANCE
Pedestrian Comfort Guidance for London (Transport for London, 2010) sets out the assessment criteria for understanding pedestrian capacity on footways. This process can also be applied to footpaths in the parks. The Guidance sets out criteria for defining acceptable comfort standards relating to the volume of pedestrians and the usable footway space. Pedestrian Comfort Levels (PCL) provide a measure of pedestrian congestion, in terms of the number of pedestrians per metre of footpath per minute (ppmm).

Calculating the PCL for a footpath during the peak hour of the week, can help to identify existing constraints and opportunities. The Royal Parks advocates that footways which are being considered for a shared use route with cyclists, need to already observe a PCL B-grade, whereby flows of 15 to 17 ppmm are not exceeded during the peak hour.

Designers should consider the use of the space immediately bordering a path, as adjacent furniture, fencing, hedges and building lines all reduce the usable path width. Where technically feasible and environmentally appropriate, benches, signs and fencing should be set back 500mm from the path edge to avoid impinging on the effective width.

Key Design Features
Key infrastructure features are detailed in the main guidance document which are designed to positively impact on user behaviours. These include:

- **Gateways**
  Creating a sense of arrival or indication of a transition in dynamic, promoting an expected change in awareness and behaviour.

- **Fencing**
  Providing an appropriate degree of physical control or visual delineation, impacting on route choice, sense of ownership, safety and maintenance regimes.

- **Pedestrian crossings**
  Supporting pedestrian desire lines and facilitate safe crossing while being appropriate for the character and use of the area.

- **Behavioural (speed calming) interventions**
  Often in the form of vertical (rumble strips) or horizontal deflections (pinch points) to moderate speeds and enhance safety for all users.

- **Cycle parking**
  Enabling safe and convenient securing of bicycles in appropriate locations that can be easily accessed and maintained.

- **Signage**
  Clear guidance or instructions to visitors can help encourage considerate behaviour. While signage should generally be minimised, it may be introduced at locations where unsafe cycling behaviours have been observed but enforcement is limited.

- **Surface materials**
  Acting as an important visual and textural element that designers can use to influence behaviour by guiding visitors or alerting them of a change in priority or use, and/or to assist those with visual impairments.
The Path Typologies approach helps to identify the various functions and forms of paths across The Royal Parks, thereby enabling the documentation of the existing walking and cycling network and its performance. This assessment forms the first stage of the ‘Seven-Stage Delivery Process’ and provides a quick indication of whether the path width and/or surface treatment are appropriate for the context.

The categorisation process considers three key criteria which together illustrate who the path is for, how it operates, its configuration and its landscape context. Designers should use this three stage process to classify the path type which can then be used to inform design decisions relating to width and surface material.
1. PERMITTED USERS

Pedestrians only
On paths in formal gardens, sensitive areas, and as a generic treatment across much of the Parks.

+ Cyclists
On permitted shared use paths.

+ Motor vehicles
On roads which may be designed for general traffic access or authorised vehicles only.

2. EXISTING USE

Classified as a high flow link where:
- pedestrian flows exceed 500 pedestrians/hour;
- cyclist flows exceed 200 cyclists/hour; and/or
- motor vehicle flows exceed 200 vehicles/hour.

Classified as a low flow link where:
- pedestrian flows are less than 500 pedestrians/hour;
- cyclist flows are less than 200 cyclists/hour; and/or
- motor vehicle flows are less than 200 vehicles/hour.

3. PATH CHARACTER

Informal
Generic or meandering paths that form a naturalistic part of the parkland landscape.

Formal
Paths that are generally straight and direct, responding to the surrounding architectural form and/or supporting key pedestrian desire lines.

Special
Paths relate to a historic or environmental landmark or form part of an ornamental garden.

Every path across the walking network can be evaluated and categorised based on these three criteria – in turn describing the key characteristics of that path and its role in the Park.

The path standards table overleaf gives the full list of path types and examples of the expected appearance of each path type, in a rural and urban setting.

Note: A road may qualify for two different typologies depending on the time of day and whether it is closed to through traffic. Not all path types will have a corresponding ‘special’ character.
The Royal Parks regularly receive requests to open up more paths to cycling and/or to accommodate new cycling routes across the parks. The Criteria for Success forms a key part of the consultation process for any proposals that look to formally introduce cycling as a permanent feature on an existing pedestrian only path, or as part of a new path proposal.

The Criteria for Success is a three stage process to ensure that the quality of the visitor experience is maintained and the design approach complies with the Overall Approach to Hardscape in the Royal Parks. The guiding criteria and process draws on experience and visitor data collected from a number of pedestrian and cycling studies across the Royal Parks, recommending a pre-implementation stage, a trial stage and an ongoing monitoring regime for all shared use schemes.

Stage 1 identifies whether a proposed route should be progressed to a trial stage of monitoring. The Success Criteria are designed to act as a way of filtering route options to best utilise resources and ensure that only the most potentially viable shared use routes are progressed to a trial stage.

The feasibility process comprises several of the common assessment techniques and should generally satisfy the following criteria:

**CRITERION 1**

**CUSTOMER RESEARCH SURVEY (STAGE 1)**

Before implementing any proposed shared use scheme, a customer survey with an agreed acceptable sample size should be conducted to determine the existing satisfaction levels of visitors on a particular link.

**CRITERION 2**

**CAPACITY STUDY (STAGE 1)**

A pedestrian level of service study should be conducted on a proposed shared use route before cycling is introduced, to determine the existing pedestrian comfort level and capacity of the path. Where high pedestrian flows lead to path capacity issues, it is unlikely that cycling will be considered appropriate for that path. Any existing route that currently experiences pedestrian comfort levels of PCL B- or worse (greater than 15 people per metre per minute, with 50% restricted movement), will likely not be suitable as a shared use path in its current configuration. Opportunities to introduce cycling on higher capacity paths will be determined on a site by site basis.
**CRITERION 3**

**SAFETY IMPLICATIONS (STAGE 1)**
Observational studies should be used to identify any potential issues which could arise with the introduction of cyclists, including: maintaining acceptable access arrangements, sightlines and visibility; supporting safe interaction with motor vehicles and pedestrians; identifying path intersections of ‘high risk’ where high pedestrian flows cross over the proposed route. Where a critical safety issue is identified, a trial will need to be carefully considered with appropriate mediating factors included as part of the temporary design.

**CRITERION 4**

**POTENTIAL DEMAND FOR THE ROUTE (STAGE 1)**
An assessment of existing cycle flows on adjacent parallel routes should be used as a proxy for the demand for a new cycle route through the park. Understanding the impact of local trip attractors on cycling movements through the area should also be estimated. In conjunction to identifying the range of potential users, to identify the overall cycling network benefit of opening up the route. An exceptionally high level of cycling demand may not be deemed appropriate and should be considered as part of a wider assessment of adjacent routes outside the park to provide the safest, most appropriate design solution.

**CRITERION 5**

**COSTS FOR IMPLEMENTATION AND VALUE FOR MONEY (STAGE 1)**
All design options and interventions for walking and cycling have to provide value for money for the organisation weighed up against the life-cost of the item. This can be estimated as part of the feasibility study by considering the extent of intervention required to provide a new shared use route (surfacing, signage, access alterations). It should also consider the maintenance requirement for any additional facility or by designing out maintenance issues such as desire lines or requirements for painted markings/additional signage. A high level cost-benefit appraisal should be used at this stage to identify whether a proposed route will be financially viable and maintainable in the long term.

**Stage 2: Trial Methodology**

Having been through a feasibility design process, all proposed shared use routes will undergo a trial period, whereby supporting signage and / or longer term infrastructure is to be installed to support the temporary opening of a shared use route. A trial will be undertaken for a minimum of 18 months (including two summer periods) in order to collect sufficient data to inform the decision-making process for Judging Success (Stage 3).

Various methods of data are collected by consultants, or directly through stakeholders and partner organisations. The Programme Manager will determine which of the following assessment processes should be carried out to supplement the feasibility assessment survey.

**CRITERION 1**

**CUSTOMER RESEARCH SURVEY (STAGE 2)**
Upon trialling a new route, responses should be assessed against the existing satisfaction levels to determine if there is a drop in the percentage of people that consider the ‘quality of their visit excellent or good’, with ‘cycling in the park’ as a stated reason.

- < 2% reduction in satisfaction = acceptable and passes criterion
- 2 – 7% reduction in satisfaction = requires a review of responses
- > 7% reduction in satisfaction = unacceptable and does not pass the criterion.

**CRITERION 2**

**CAPACITY STUDY (STAGE 2)**
Any route that now experiences pedestrian comfort levels of PCL B- or worse, as a result of introducing cyclists, should be reviewed as part of a Safety Implications assessment.

**VULNERABLE PEDESTRIANS**
An additional research survey should be considered to determine whether pedestrians are ‘satisfied, comfortable or very comfortable’ with cycling, including vulnerable users (classified and registered disabled, elderly and people with children under 5 years of age). If a higher proportion of users are ‘uncomfortable’ during implementation of a trial, the cycle proposal will be deemed to have failed.

**CYCLISTS**
A survey of cyclists may be appropriate where there are high levels of cycling. The Kensington Gardens results for Studio Walk are considered the benchmark, where 94% of cyclists thought the cycle path worked operationally ‘OK, well or very well’. Should less than 94% consider a given shared used path to be acceptable, an additional review of cycling facilities will be required.
**Stage 3: Judging Success**

**CRITERION 3**

**SAFETY IMPLICATIONS (STAGE 2)**

A study involving at least six days of CCTV footage, including weekdays and weekends, should be conducted where trialling the introduction of cycling. For cycling to be considered permanently on a given path, more than 95% of cycle journeys should involve neither major nor minor conflicts with pedestrians or other cyclists. A minor conflict is defined as that which involves a cyclist needing to brake or a pedestrian change direction; a major conflict is defined as a cyclist or pedestrian needing to take emergency action, which could be considered a ‘near miss’.

**CRITERION 4**

**ACTUAL DEMAND FOR THE ROUTE (STAGE 2)**

Pedestrian and cycle flow counts across a weekend and week day should be conducted every month during the trial period, to ascertain how the route is performing and to assess whether safety is being compromised.

**CRITERION 5**

**COSTS FOR IMPLEMENTATION AND VALUE FOR MONEY (STAGE 2)**

A more detailed cost-benefit appraisal should be used at this stage, including pedestrian and cycle flow count data and other actual implementation cost details to determine whether longer term infrastructure measures should be installed.

**BORDERLINE REVIEW**

Where a scheme has issues identified by the public and / or Royal Parks staff, a safety review should be conducted which focuses on the identified issue.

The Royal Parks and the surrounding urban context are dynamic places, and judging whether a shared use route is successful will change from year to year. Wider implications of changing park access arrangements, new trip attractors in the local area, residential developments and so on, will continually shape how the parks are used by pedestrians and cyclists. Stage 3 should therefore be used as an ongoing monitoring process for not only recently introduced shared use routes, but also historic routes to ensure that the network remains fit for purpose.

A permanent shared use scheme, informed by the consultation process and evidence collected as part of Stages 1 and 2, will have to balance the needs of all visitors. Proposals will not be implemented permanently if there is evidence that it:

- insufficiently resolves or creates a safety issue
- has a significant detrimental effect on visitor experience
- fails to pass all critical success criteria assessments as part of both Stages 1 and 2.

Across all the parks attaining success involves meetings the desirable strategic objectives over both the short and long term. It is vital to continue to monitor stakeholder satisfaction and to act on issues raised.

Long term success will be measured by the following:

- Gather feedback from stakeholders and visitors on the operational performance of the shared use path with regular surveys conducted on-site for pedestrians and cyclists.
- Annual review of the strategy and programme to summarise observations and key survey results.
- Utilise annual visitor surveys to understand the changing dynamics of visitor movements across the parks and to identify where ongoing studies are required.
- Ensure customer satisfaction levels are maintained.
- Benchmark projects against international park and city design standards and consider opportunities to trial new design approaches where appropriate.
- Maintain an ongoing review programme for new schemes that look at pedestrian and cyclist interactions throughout the year.
- Utilise Road Safety Audit and Bike Week event feedback to understand wider opinions on schemes and help to inform design and maintenance schedules.
- Update The Royal Parks website regularly to encourage feedback on new schemes.

**ONGOING EVALUATION OF SHARED USE PROVISION**

The ever growing number of visitors that are attracted to the Royal Parks creates immense pressure on the path network to continue to perform at a high level. As part of the long term maintenance strategy for shared use facilities, path performance will be reviewed regularly to ensure that the criteria that were satisfied during the initial approval process, continue to be operationally sound.

Continued review and monitoring should indicate where a shared use path no longer functions satisfactorily, be it through an increase in pedestrian and cycle flows, changes in access arrangements. Additional issues relating to user satisfaction and park management would prompt a design response offering a solution to resolve the performance issue.

The Royal Parks will look at opportunities to upgrade the shared use facility while maintaining a tarmac neutral approach, and maintaining pedestrian priority.

Where conditions on a shared use path cannot be improved without significantly impacting on the wider operation and configuration of the park landscape, the following measures may be necessary:

- Closure of an existing shared use path which does not operate safely, reverting to pedestrian only.
- Strategise alternative routing options for cyclists. It may be that the optimal design solution for cyclists is to provide better cycle routes outside the park boundary on parallel links, or segregated facilities on park roads.

**CONCLUSION**

Interventions and improvements need to be carefully balanced to provide benefits for all park visitors. Routes should provide a high quality experience and ‘level of service’. The presumption that signage should be kept to a minimum to respect the beauty of the historic significant landscapes, and surface materials selected that assist pedestrians with visual impairments, while maintaining the visual and historic character of the parks.

The Royal Parks therefore advocates utilising the processes outlined in this design guidance to take a holistic approach in making a balanced decision on a case by case basis.
The Royal Parks

1. Bushy Park
   London Borough of Richmond Upon Thames

2. Richmond Park
   London Borough of Richmond Upon Thames

3. Brompton Cemetery
   Royal Borough of Kensington and Chelsea

4. Kensington Gardens
   Westminster City Council and Royal Borough of Kensington and Chelsea

5. Hyde Park
   Westminster City Council

6. The Regent’s Park with Primrose Hill
   Westminster City Council and Camden Council

7. The Green Park
8. St James’s Park
9. Victoria Tower Gardens
   Westminster City Council

10. Greenwich Park
    London Borough of Greenwich

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