cyclox
the voice of cycling in Oxford

Design guide for a better Oxford

CYCLOX INFRASTRUCTURE GROUP

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Executive summary

Purpose

Cyclox is the voice of cycling in Oxford, and we aim to support more people to cycle, more often and more safely. We support Vision Zero and a cycling infrastructure that works for people of all ages, abilities and backgrounds.

Oxford faces significant constraints due to its historic layout, limited space and traffic bottlenecks, yet it already has a high number of people who cycle and a strong potential for growth. To address these challenges, Cyclox has developed this Design Guide to provide a clear framework for delivering safe, inclusive and high-quality cycling infrastructure across the city.

Cyclox acts as a constructive but critical friend. We collaborate closely with councils and partner organisations, while robustly challenging schemes that may fall short of safety requirements or policy commitments.

Rationale

Evidence shows that high-quality, well-designed cycling infrastructure improves road safety, delivers health, climate, and economic benefits, and increases the number of people cycling. This Design Guide addresses these issues and sets out best-practice design expectations for Oxford.

Strategic alignment

The Design Guide supports road safety, climate, public health, and active travel objectives, and aligns with national policy and best practice.

Recommendations

This Design Guide sets out Cyclox's expectations to help deliver safer streets and make cycling a practical, inclusive and enjoyable way to travel in Oxford.

Our stance

Cyclox takes every opportunity to push for improved infrastructure by working with councils and partnering with other alternative transport groups. We are prepared to call out situations where progress is unsatisfactory.

1.1 Critical friend We fully co-operate with the councils' development of designs and initiatives and welcome early involvement, but we robustly call out and challenge situations where there is a departure from standards, guidelines and policy.

1.2 Speed of improvements We push for greater ambition and more speed in implementation of improvements. Cyclox wants to see Oxfordshire County Council adopt a 'quick build' approach, where interventions are quick, low-cost and do not require significant design work. Where and when possible, these should be replaced with permanent improvements.

1.3 Co-operation with OxPA We consult with and co-operate with Oxford Pedestrian Association (OxPA), recognising that we frequently share objectives.

1.4 Co-operation with other cycling and active travel groups We endeavour to present a united front on cycling issues and consult with other cycling organisations such as Cycling UK, Oxfordshire Cycling Network, Walk Wheel Cycle Trust, Isis Cyclists, JoyRiders and Condors. We also work with Oxfordshire Liveable Streets (OLS) and we are a member of the Coalition for Healthy Streets and Active Travel (CoHSAT).

Low-cost, minimum design improvement at Horspath Driftway, but it took three years to put it in place

1.5 Holding to account Cyclox spends considerable volunteer hours contributing to the development of County and City policies as they affect alternative travel and cycling. We use our collective detailed knowledge of these policies to challenge the County and City Councils when they do not adhere to them in practice.

1.6 Applying the right standards We challenge the County to use appropriate current guidance, in particular the government's Cycle Infrastructure Design (LTN 1/20) and Inclusive Mobility, and to stop specifying the Design Manual for Roads and Bridges (DMRB) which has led to the production of unsuitable designs. This standard should only be used for motorways and designated UK trunk roads (in Oxford this means the A34 only).

Safety

Cyclox takes every opportunity to push for improved infrastructure by working with councils and partnering with other alternative transport groups. We are prepared to call out situations where progress is unsatisfactory.

2.1 Reducing speed We push for implementation of 20 mph speed limits on all roads inside the ring road and in all built-up areas across the county. We also campaign for 50 mph maximum speed on the entire ring road including the section of the A34 between the Hinksey and Pear Tree interchanges. In places where there are significant at-grade crossings such as at Barton Park, we think 30 mph is more appropriate.

20 mph is a popular and proven road-safety policy

2.2 Protected cycle lanes Wherever feasible we ask for the creation of protected cycle lanes or tracks separated from pedestrians and motorised vehicles. Where road width does not allow this, we would like to see the approach used on Magdalen Bridge and the Iffley Road, where an adequate space for cycling is laid out, preferably coloured red, and vehicles using the reduced central space have to negotiate their positions.

2.3 Cycle transport to schools We identify opportunities to introduce School Streets (closed to motor vehicles at school drop-off and pick-up times) and remove parking spaces outside schools. We support initiatives to establish 'bike buses' (groups of children cycling together with adult marshals) on popular routes to/from schools.

Warneford Lane segregated cycle lane is inclusive and safe but not properly surfaced

2.4 Removal of obstructions We identify and push for the removal of obstructions on cycle routes including deliberate physical barriers and poorly placed street furniture. We ask for prevention of car parking on cycle lanes where there is a risk of 'dooring' (car doors hitting cyclists). We support an ongoing review of barriers, e.g. removing a barrier at the towpath by Folly Bridge.

2.5 Junction design We identify the most dangerous and inconvenient junctions for cyclists. We lobby for improvements and make specific suggestions for short- and long-term improvements.

We study junctions that are difficult or dangerous for cyclists and pedestrians and develop improved designs
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2.6 Collision investigation We use the term 'collision'. 'Accident' implies bad luck, whereas bad infrastructure is often the cause of a collision and creates an ongoing risk. Current investigations of collisions are inadequate. We want to see a consistent process which can quickly identify root causes of all incidents involving injury. Where infrastructure is inadequate we expect quick improvements to mitigate the probability and severity of a recurrence. It should not be left entirely to the resource-stretched police to look at collisions involving pedestrians and cyclists.

2.7 Coroners' findings Coroners can establish contributing factors (or causes) of cyclist fatalities and issue a Prevention of Future Death report (PFD), but they rarely do so in Oxfordshire.
Coroners can only act on the basis of evidence submitted, so police and County need to establish causes before the inquest. We push for PFDs to be issued to the County when infrastructure shortcomings are identified and for them to be acted on promptly.

Only 3% of fatalities on UK roads result in a PFD – wasting precious information about underlying causes, often relating to infrastructure shortcomings

Inclusivity

Cycling should be accessible, safe and pleasurable for everyone. Infrastructure should be suitable for all types of bikes.

3.1 Age, gender, disability, income and ethnicity We look for cycling infrastructure that is safe, usable and welcoming for everyone in Oxford. This includes addressing specific issues that may affect female cyclists, people with disabilities, or minority ethnic groups. Cycling should be open to all, regardless of income, and should not depend on access to expensive bikes, equipment or special clothing.

A layout that doesn't consider non-standard bikes

3.2 E-bikes We fully support pedal-assisted e-bikes with speed limiters. Non-pedal-assisted and non-speed limited e-bikes are illegal electric motor bikes unless they have registration plates and are only used on main carriageways.

3.3 Bike and e-scooter share schemes We fully support shared bike and e-scooter schemes in the city. We call upon the council to build off-pavement parking infrastructure for these schemes by re-purposing car-parking spaces on roads and in car parks. Shared bikes and e-scooters should not take up pedestrian space and cause obstructions. We also call upon scheme operator companies to enforce correct parking of bikes and scooters by their customers. Operators should be expected to apply geofenced speed limits on all routes that are shared with pedestrians to improve safety.

Cycle routes

Cyclox represents the needs of commuters, recreational cyclists and cycle transport in general, including parents and students cycling to and from school.

4.1 Core design There are **five core design principles** representing the essential requirements to achieve more people travelling by cycle or on foot. These are based on best practice both internationally and across the UK. **Networks and routes should be coherent, direct, safe, comfortable and attractive.**

Inclusive design and accessibility should meet all five of these core design principles and cater for the broadest range of people. Infrastructure must be accessible to all and the needs of vulnerable pedestrians and local people must be considered early in the process. The Equality Act 2010 requires public sector authorities to comply with the Public Sector Equality Duty. This includes making reasonable adjustments to the existing built environment to ensure the design of infrastructure makes it accessible to all.

So, we campaign for routes that are easy to use, protect cyclists and enable people of all ages, abilities and experience to get around by cycling.

4.2 Main commuting routes The main road routes in Oxford all have challenges for cyclists. The main roads need sufficient lane width for buses, as a a key element of non-car travel. (The required lane width is narrower when speed limits are reduced, so we want all speed limits within the ring road to be no more than 20 mph.) We push for the creation of space for physically protected cycle lanes by removing all car-parking spaces meeting the criteria in Action 6 of the County Council's Central Oxfordshire Travel Plan. This includes removing on-street public parking on corridors identified as being either active travel primary routes or part of core bus routes. It means narrowing the carriageway to the minimum required for buses to pass at 20 mph.

When there is not enough width to create physically protected cycle lanes, we support the provision of on-road painted cycle lanes in both directions e.g. Iffley Road, but the speed limit must always be 20 mph on such roads.

Iffley Road cycle lanes, where parking has been removed and a 20 mph speed limit imposed

4.3 Minor road routes Side streets can provide safe, inclusive cycling routes without the need for dedicated cycle lanes or other changes if motor traffic volumes are low enough and antisocial driving is prevented. A 2024 study of Cowley low-traffic neighbourhoods (LTNs) showed that removing through-traffic from minor roads halved the number of collisions. We support the implementation of LTNs using modal filters in all Oxford neighbourhoods. LTNs are the only way to enable inclusive cycling on streets too narrow for any cycling infrastructure. We strongly oppose the County Council's decision to allow taxis and other non-emergency vehicles through the East Oxford and Cowley LTNs and replace bollards and planters with ANPR cameras. Feedback from Cyclox members is that these roads have become significantly less safe for cyclists since the changes took place.

Analysis of LTNs in East Oxford, implemented in April 2021, shows that collisions causing casualties inside the LTNs fell by over 50% for the period 2022–2023 compared to 2015–2019 (source: CoHSAT)

4.4 Dual options We oppose provision of multiple options for making the same cycling movement along or across roads. We want one good option for cycling, not two bad or inferior ones. Multiple options are confusing, both for people cycling and for people walking and driving.

Less than satisfactory provision for cyclists. On road (unprotected) and on a shared footpath. Two options, neither good

4.5 Advance green cycle signals We lobby for early start green cycle signals at busy junctions to allow cyclists to enter intersections safely in a position where other road users can see them.

4.6 Continuity We look at popular commuting and recreational routes from end to end, recognising that the weakest link will determine the success or failure of the route.

Early start green cycle signal at the John Radcliffe junction on Headley Way

Cycling is banned in Queen Street between 10am and 6pm. There is no direct east–west route through the city centre

4.7 Junction redesign Junctions are often the biggest barrier to safe and inclusive cycling. Most junctions in Oxford have been designed to maximise throughput of motor traffic with little or no provision for safe and convenient cycling. We push for every main road junction in Oxford to be rebuilt to prioritise and protect cyclists, pedestrians and other footway users.

Visualisation of the Old Road/Gypsy Lane junction redesigned for cycling and pedestrian priority

4.8 Contraflow on one-way streets We push for cyclists to be able to cycle in both directions on low-speed one-way streets.

Contraflow cycling is now allowed on South Parade in Summertown

4.9 Navigation We look at route legibility in Oxford and push for simple signage and intuitive layouts to allow smooth progress along selected routes.

We need many more cycle-route signs. These should include miles or minutes to the destination

4.10 Cycle streets These are increasingly popular in progressive European towns and cities. We believe there are many residential areas in Oxford where pedestrians and cyclists could be prioritised and cars allowed as 'guests'. Speed limits for cars and bikes in these streets should be 10 or 15 mph. Typically, a cycle street needs a ratio of no more than one car to four people cycling in order to work.

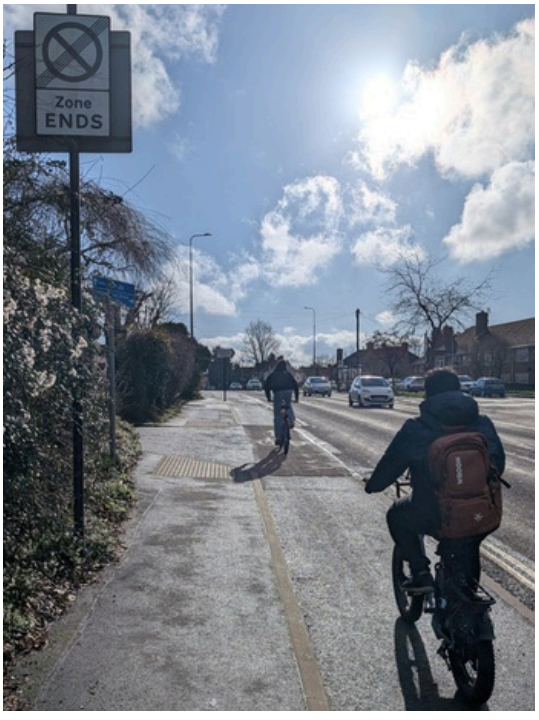
Cambridge is constructing Adam Street as a cycle street. It will be the first of its kind in the UK

Cycle lanes

There are many cycle-lane options. Our recommendations depend on the space available, the volume and speed of traffic and pedestrian needs.

5.1 Shared paths Paths shared by pedestrians and cycle riders should be at least three metres wide. Anything narrower is unacceptable. Narrow shared paths introduce potential conflict, can make pedestrians fearful and occasionally lead to collisions. Oxford streets are often too narrow to accommodate separate lanes, but we will call out places where shared provision is not necessary or appropriate.

This is substandard provision. Note the bus stop in the bike path



The Slade cycle path is a good example of semi-separated pedestrian and cycle paths

5.2 Separation of pedestrians and cyclists on a shared path In some places shared space can be segregated into pedestrian and cycle lanes. We support designs where the pedestrian lane is slightly higher than the adjoining cycle lane, which is in turn slightly higher than the main carriageway. We want a soft demarcation of the cycle lane that still allows bikes to safely steer onto or off the main carriageway, e.g. Cambridge kerbs on the Slade cycle path.

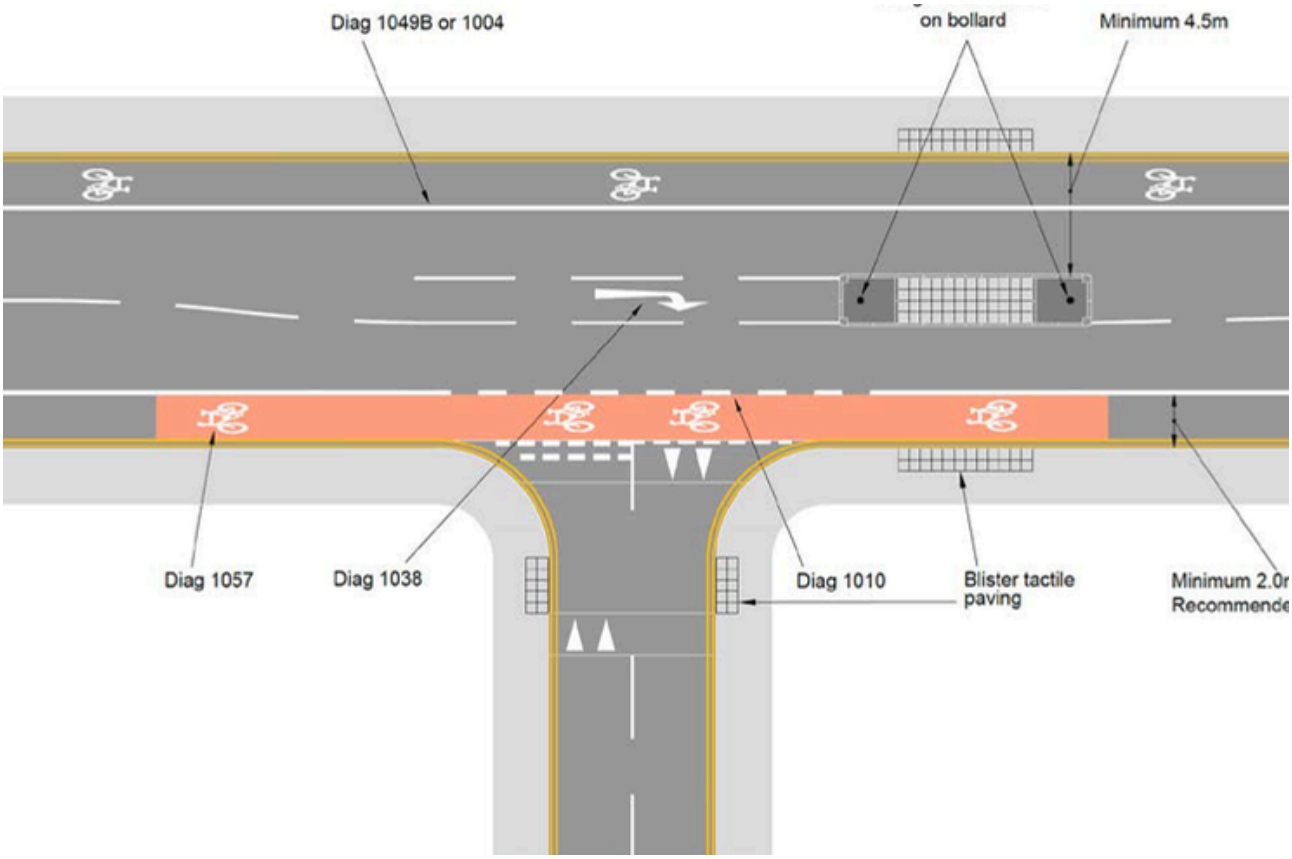
5.3 Side-road entries to allow cycle paths to maintain a constant level We want the Highway Code hierarchy to deliver 'straight over provision', especially where a cycle path is separate from the carriageway. This includes side-road entries and driveways. Dutch entry kerbs are one way to achieve this. We are disappointed that the County Council does not have a standard set of designs for side-road entries. Other Highways Authorities have these. Why not adopt their designs rather than reinventing the wheel?

There are no examples yet in Oxford of a perfect side road entry despite several recent attempts. This continuous shared path is in Camden, London

5.4 Right of way We consistently push for cycle riders on cycle lanes running parallel to a road to have right of way at non-signalised side road entries. The Highway Code (H3) is clear on this:

You should not cut across cyclists. . . going ahead when you are turning into or out of a junction or changing direction or lane, just as you would not turn across the path of another motor vehicle. This applies whether they are using a cycle lane, a cycle track, or riding ahead on the road and you should give way to them.

Other guidance, e.g. Active Travel England, LTN 1/20 and Manual for Streets are consistent with this subject https://www.activetravelengland.gov.uk/planning-active-places/side-roadcrossings



Cycle riders have the right of way crossing side roads. Drivers must give way to them (image sourced from LTN 1/20 Figure 10.12)

5.5 Floating bus stops We support the provision of floating bus stops (where a cycle lane is routed behind the bus stop waiting area). This makes it safer for people cycling who aren't obliged to wait behind a stationary bus or negotiate their way into a potentially busy traffic stream.

This floating bus stop on Headley Way is one of only a few examples in Oxford

5.6 Colouring Cyclox policy is that at all locations where cycle lanes cross roads (including side streets) the tarmac should be coloured red. The only exception we support is the use of buff coloured material in heritage areas where there are many sandstone buildings and walls.

Coloured tarmac gives a clear signal to drivers that this is a cycle lane. Melbourne uses green for cyclists (and yellow for pedestrians), Cyclox wants red for cycle lanes in Oxford

5.7 Staggered crossings and chicanes We push for removal of staggered crossings and no more building of new ones unless there are more than three adjacent carriageway lanes to be crossed. Staggered crossings (and chicanes) are difficult to negotiate. The space provision on staggered-crossing islands is often insufficient for those using the crossings.

The Kidlington roundabout is much better with direct single-phase signalled crossings of each arm.

5.8 Lighting We review infrastructure designs for adequate lighting for security and avoidance of hazards. Inadequate lighting discourages cycling at night.

Marston Ferry cycle path is well lit even where it is separated from the road by a bank

5.9 Visibility Cycling and pedestrian paths should be wide enough to provide good forward and sideways fields of view and avoid blind corners or sections narrowed by overgrown trees and bushes.

Blind corners risk collisions and can feel unsafe

5.10 Bridges and underpasses At-grade crossings of major roads are often impractical due to heavy vehicle traffic and the number of pedestrians and cyclists crossing. In such cases, and at all railway crossings, a dedicated bridge or underpass is required.

Bridge crossings are preferable where the adjacent ground levels are significantly higher than the road or railway, as this reduces the need to have long access ramps to the bridge. Where the bridge level would have to be high relative to the surroundings (e.g. with electrified rail tracks) then an underpass is the preferred option. High-level bridges are too physically demanding for many users and require long approach ramps. (Zigzag ramp configurations are particularly dangerous for cyclists.)

Our preferred option is a well-designed underpass with space, drainage and lighting. With sufficient width and forward visibility, they are not a safety hazard. The approach gradient should be based on LTN 1/20. Manual for Streets para 9.1.9 sets out the requirements for underpasses.

How it should be done – an underpass in Plymouth

5.11 Comfort We push for the County Council to repair, level and resurface cycle lanes including those on the main carriageway so that cycling is comfortable, attractive and safe. Potholes are a safety issue if a person cycling has to swerve to avoid them or could fall after hitting one.

5.12 Maintenance We chase the councils to address maintenance issues such as potholes, lying water, damaged or missing signage and vegetation obstructing cycle paths. We encourage public use of Fix My Street for issues that need urgent attention and suggested improvements to cycle paths. We push for scheduled maintenance of principal cycle routes. We want the councils to prioritise resurfacing of streets comprising major cycle routes.

5.13 Temporary arrangements We want to see clear instructions to council contractors that safe cycle routes must be maintained during construction projects and roadworks. ‘Cyclists dismount’ signs should not be used, and should not be placed in cycle lanes, where they are dangerous.

Construction contractors must maintain provision for cyclists in the same way as they do for cars

Security

Bike theft is a major problem in Oxford. It discourages people from cycling and hurts economically disadvantaged groups the most. Cyclox lobbies for more secure bike parking in central Oxford, at the rail stations and at Park and Ride terminals. Secure parking is especially important to support the growth of e-bikes. We want to see on-carriageway cycle parking, in place of car parking

Cycle hangars are useful in areas of higher-density housing where there isn’t space for bike storage on the property. This example is from Jericho

6.1 Cycle stands, location, design and accessibility Secure bike parking requires at minimum a fixed stand that bikes can be locked to. We lobby for more cycle-parking locations, which should have Bilton or Sheffield stands (our preference is Bilton) at a 1.2m spacing (as recommended in LTN 1/20). Cycle racks need easy access and should be well lit. We want to see a budget for the provision of bike hangars in streets where housing has little off-street bike parking.

6.2 Bike garages We believe Oxford should have more bike garages similar to that at the Westgate Centre (although that one is inconveniently located for most users). A garage at Oxford railway station is a particular need.

This is the covered cycle hub at Cambridge railway station

6.3 Bike marking We encourage the use of bike marking by BikeRegister to reduce theft from public cycle parks and increase the probability of stolen bikes being returned to the owner.

Cover photograph: Tejvan Pettinger
Report photographs: Cyclox Infrastructure Group, Camden Cyclists CC

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