



Rialtas na hÉireann  
Government of Ireland

**NTA**  
Údarás Náisiúnta Iompair  
National Transport Authority



**ACTIVE TRAVEL**

**Cycle Links**

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# 4

## Designing for Cycling



## ➔ 4.2 Cycle Links

- Key Design Objectives
- Cycle Link Types
- Two-way & Contraflow
- Bus Stops
- Loading & Parking
- Transitions
- Pedestrian Crossings of Cycle Tracks

# Cycle Links – Introduction

- Cycling infrastructure joining origins to destinations
- Segregated (continuous or intermittent)
- Integrated (cycling in mixed traffic)
- Optimum design depends on
  - Traffic regime (Table 2.1 *Facilities Selection Guide*)
  - Space required for cycling (Table 2.2 *Width Calculator*)
  - Movement function and place context
  - Frequency of side roads and accesses
  - Kerbside and road frontage activity
  - Pedestrian crossings and desire lines

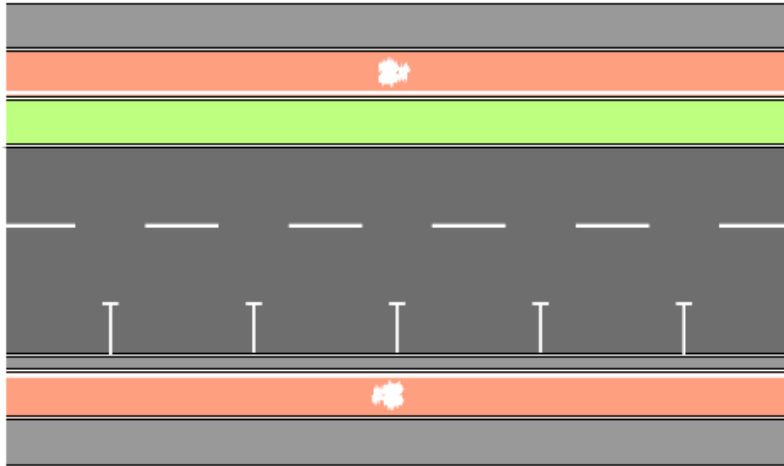


# Key Design Objectives

- Provide the five main requirements for cycle-friendly infrastructure
- Provide space for side-by-side cycling
- Segregate, unless traffic flows and speeds are low enough
- Provide separation between pedestrians and cycle users
- Cycling provision should be suitable for most people and not exclude potential users ('green category' in Table 2.1)

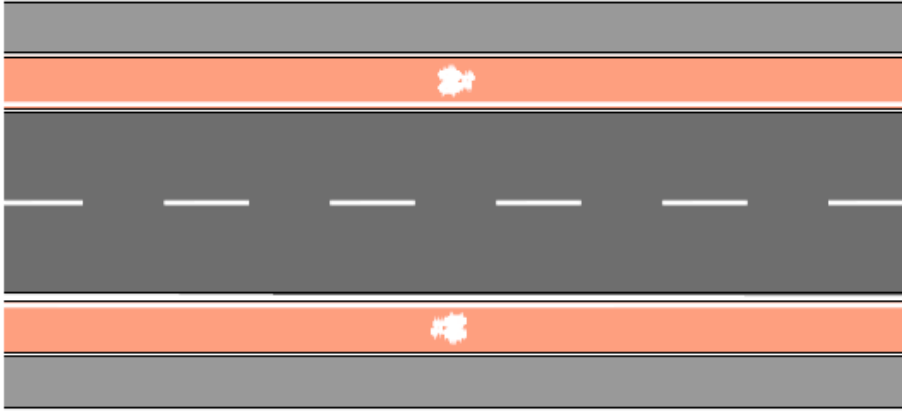


# Standard Cycle Tracks



- Physically separated from carriageway by a full height kerb and, ideally, a verge
- Provision suitable for most users – up to 60 km/h speed limit and all traffic volumes (see Table 2.1)
- Suitable for one-way and two-way cycling
- Min. 60mm level difference between cycle track and footpath; where the cycle track is at footpath level provide a verge or raised delineator strip
- Avoid dishing at vehicular entrances; use short ramps or entry kerbs to maintain cycle track and footpath at consistent level across the access
- Crossfall away from traffic is more comfortable for cycling but requires additional drainage
- Typical Layout TL101

# Stepped Cycle Tracks



- Physically separated from carriageway by a reduced height kerb
- Typically used on roads with frequent entrances and driveways; cycle track and footpath can be maintained at consistent level across the access using bevelled kerbs
- Provision suitable for most users – up to 50 km/h speed limit and all traffic volumes
- Suitable for one-way cycling only
- Min. 60mm level difference between cycle track and footpath
- May require additional drainage
- Low kerb height may lead to parking / loading on the cycle track
- Typical Layout TL102

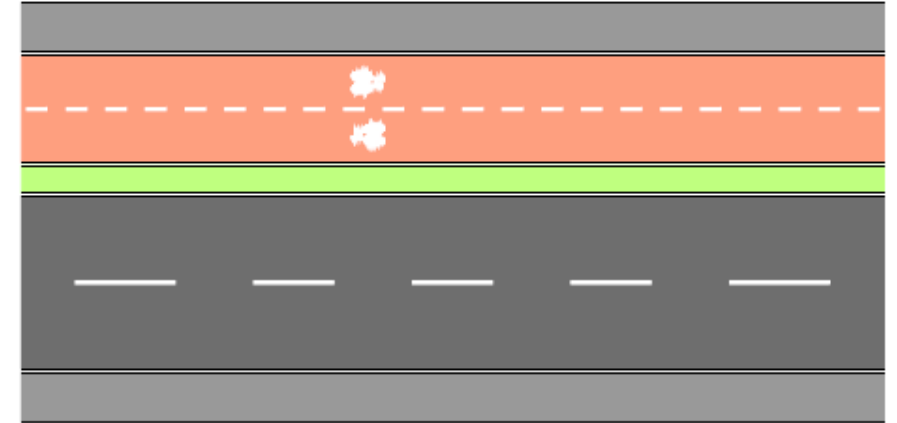
# Protected Cycle Lanes



- Cycle facility at carriageway level with physical separation from traffic; typically retain existing footpath
- Ideal for Rapid Build and interim schemes (see NTA ATAN-2023-01 *Rapid Build Active Travel Facilities*)
- Segregation provide by separator kerbs, modular separators, bollards, planters, or parking / loading bays
- Provision suitable for most users – depending on form of segregation
- Suitable for one-way and two-way cycling
- Typically utilises existing road drainage; provide gaps in segregation for run-off
- Consider type of segregation in areas with high pedestrian activity
- Consider access for maintenance and cleaning
- Typical Layout TL103

# Two-way Cycle Tracks

- Physically separated from carriageway by a full height kerb plus raised buffer / planted verge / parking bays
- Provision suitable for most users – up to 60 km/h speed limit and all traffic volumes
- Width of cycle track and buffer determined using Width Calculator (Table 2.2)
- Well suited for routes with constrained widths / tidal cycle flows / activity predominantly on only one side / a limited number of side road junctions
- Min. 60mm level difference between cycle track and footpath; where the cycle track is at footpath level provide a verge or raised delineator strip
- Careful consideration of design at side roads, transitions, crossings and signal-controlled junctions
- Typical Layout TL107



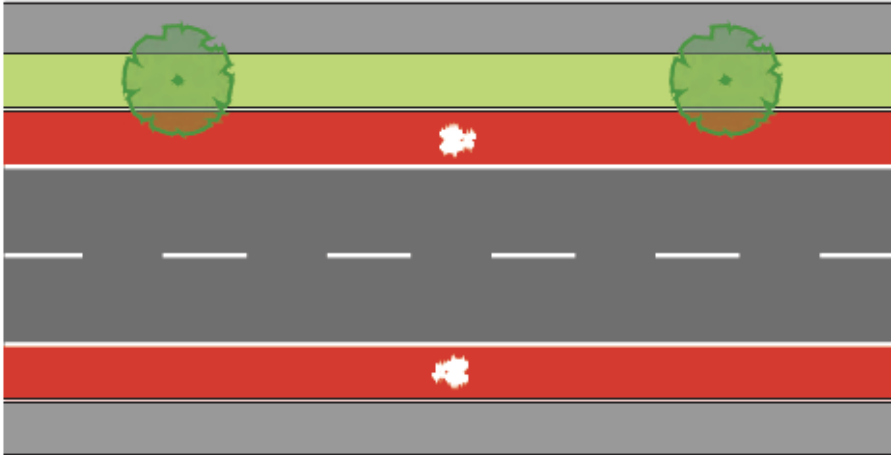


# Greenways & Shared Active Travel Facilities

- Typically offline, away from roads (through parks, along waterways, etc.)
- Should be accessible and usable by everyone
- Greenways should be designed to offer the same quality and comfort as other urban cycle routes
- The facility may be shared between pedestrians and cyclists or have separate space for each mode (dependent on density of pedestrian/cycle users, speed differential between users and the space available)
- Shared-use paths adjacent to carriageway – generally result in reduced offer for pedestrian and cycle users but may be appropriate in some contexts
- Refer also to TII Publications for design guidance
- NTA ATAN-2022-01 *Access Control of Active Travel Facilities* provides guidance for access points
- Typical Layout TL106



# Mandatory Cycle Lanes



- Cycle lane marked by continuous white edge line
- No physical protection from motor traffic
- Provision suitable for most users – up to 30 km/h speed limit and low traffic volumes
- Allows cycle users to filter past queuing traffic
- Kerbside activities (loading, parking, bus stops) can restrict use of the cycle lane, putting cyclists in conflict with moving traffic
- Existing road drainage can be utilised
- Cycle lanes are included within normal road maintenance programme
- Advisory Cycle Lanes no longer recommended
- Typical Layout TL104

# Cycling in Mixed Traffic



- Typically, local roads, residential streets, laneways
- Primary cycling position (take the lane)
- Provision suitable for most users – up to 30 km/h speed limit and very low traffic volumes (Table 2.1 Cycle facilities)
- Reduce speed of motor traffic: reduced carriageway width, horizontal / vertical deflections, tight kerb radii, surface treatments, speed limits
- Reduce volume of motor traffic: modal filters, bus gates, turning bans, traffic-free streets, parking controls
- Typical Layout TL105

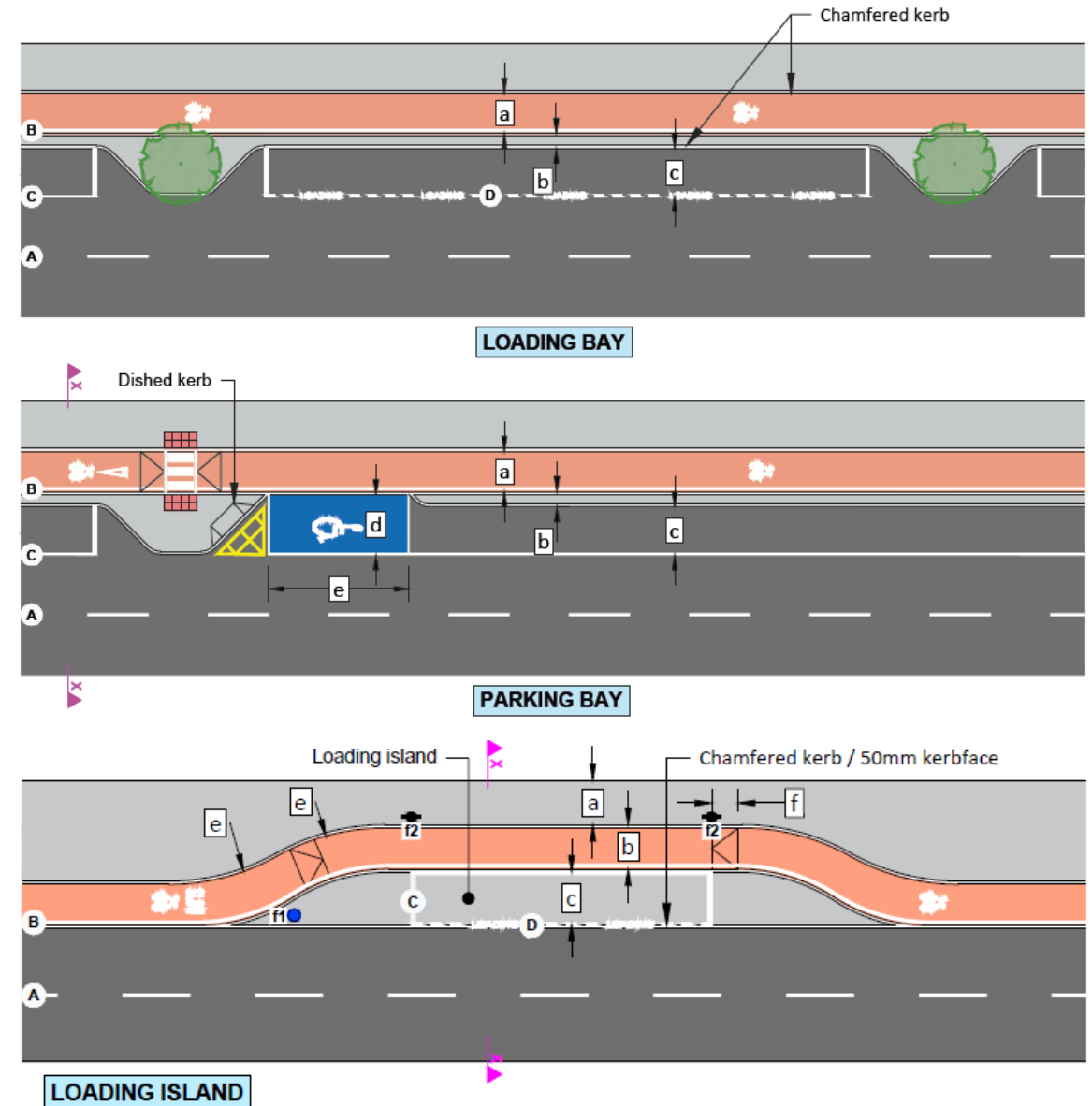
# Contraflow Cycling

- One-way streets can present a barrier to cycling by reducing permeability and making journeys longer
- Facilitate contraflow cycling on one-way streets, if possible
- Table 4.17 gives guidance on the use of Contraflow Track, Lane or cycling on Shared Street dependent on traffic regime
- Consider kerbside activity, frequency of side roads / entrances
- Should be legible to all road users
- Contraflow Shared Bus Lanes
- Typical Layout TL108 – TL110



# Parking and Loading on Links

- Parking / loading protected cycle facility is the preferred layout
- Provide 0.75m buffer
- Consider sightline requirements at junctions and side roads
- Layouts for disabled person's parking bays
- Loading options for constrained locations: loading island, partial island, in-line loading bay
- Cycle lanes on traffic side of parking / loading bays – requires a departure
- TL111 – TL114



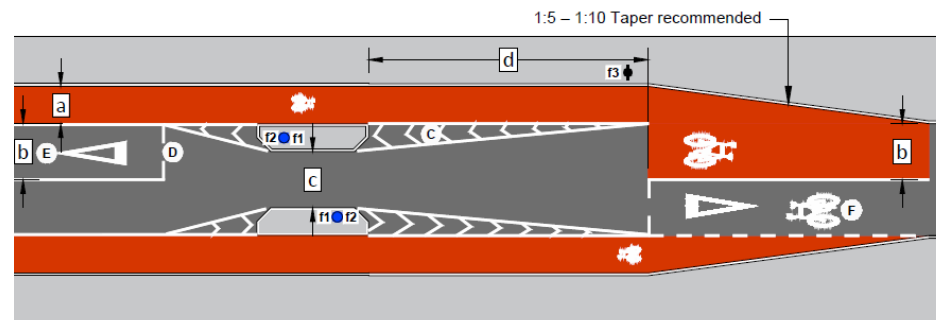
# Bus Stops



- Fully accessible for all bus passengers
- Shelter, RTPI, cycle parking, etc
- Provide sufficient space for pedestrians to wait for, board or alight the bus
- Continuous cycle facilities past the bus stop
- Ideally spaced at 250m (urban) and 400m (suburban)
- Provide good visibility between users
- Cyclist should adjust speed on approach
- Provide clear routes to/across the cycle track crossing point
- Island bus stop is the preferred arrangement where space permits (6.5m – 7m required)
- Other options: shared bus stop landing zone, in-line bus stop
- Typical Layouts TL201 – TL204

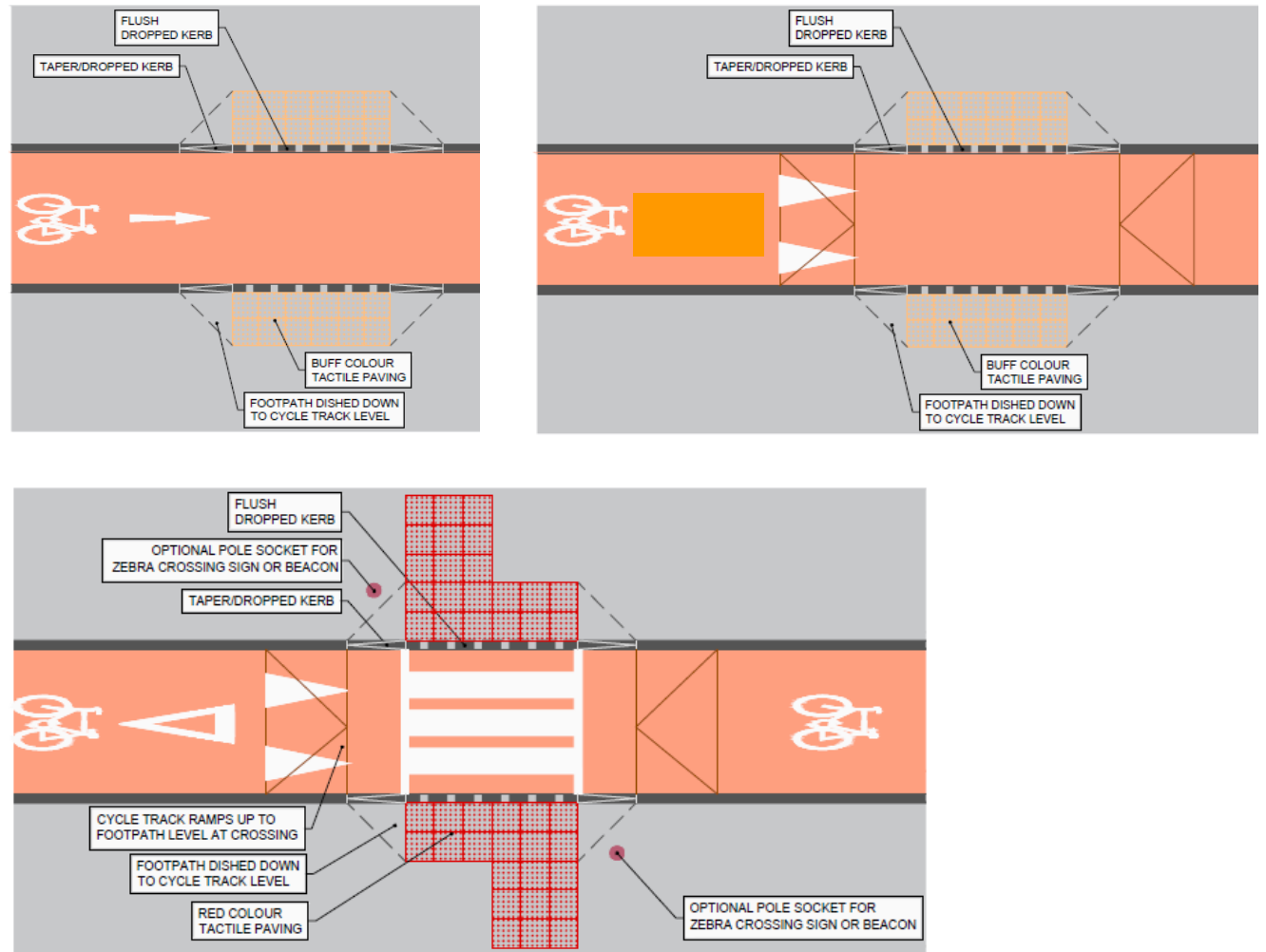
# Transitions

- Change in level and/or direction
- Avoid combination transitions (horizontal and vertical in one location); separate the movements
- Cycle track to cycle lane
- Cycle track / lane to mixed traffic
- Carriageway to cycle track
- Transition between pedestrian priority (shared) areas and cycling facilities
- Typical Layouts TL301 – TL302



# Pedestrian Crossings of Cycle Tracks

- Guidance for crossing cycle tracks away from junctions
- Use at island bus stops, parking protected cycle facilities
- Location should meet existing / anticipated pedestrian desire lines
- Should be fully accessible
- Priority should be clear to all users
- Uncontrolled crossing
- Raised uncontrolled crossing
- Controlled crossing





# Cycle Links – Key Messages

- Segregate from traffic to improve safety and attract new users
- Consider measures to reduce traffic speeds and volumes to allow for mixed cycling on residential / local roads
- Provide contraflow cycling to improve permeability
- Separate pedestrians and cyclists wherever practicable to reduce potential conflicting movements
- Consider kerbside activity, pedestrian desire lines and legibility of interfaces (carriageway / cycle facility / footpath) to improve safety and comfort for all users
- Make use of existing carriageway space where possible
- Consider use of rapid build options for cost-effectiveness





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