Road Safety in Public Realm & Active Travel Schemes

TII Seminar on Road Safety Engineering & Audit

May 2023

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Clarification

Martin Deegan:
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This Is Me

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This Is Not Me

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Learning Outcome

Road Safety in Public Realm & Active Travel Schemes

- Design Speed / Collision Severity
- Standards & Design Guidance
- Safety for Vulnerable Road Users
- Safety at Junctions
- Managing Speed with Lane Width
- Common Safety Problems

Design Speed / Collision Severity

Design Speed

Urban Areas – Make Streets Self Regulating

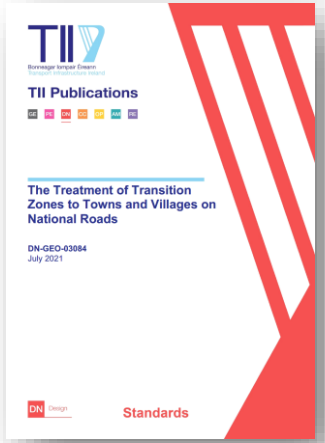
- It’s the target speed we wish drivers to travel at on our streets
- Speed limit signs applied in isolation aren’t very effective
- More effective to use physical and psychological controls
- Important to balance street context & function

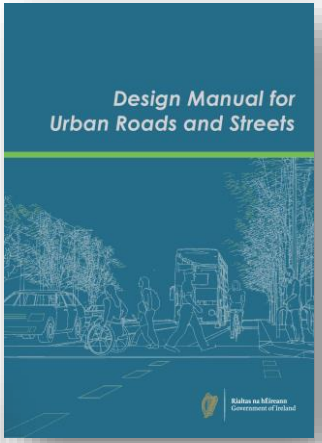
Standards & Design Guidance

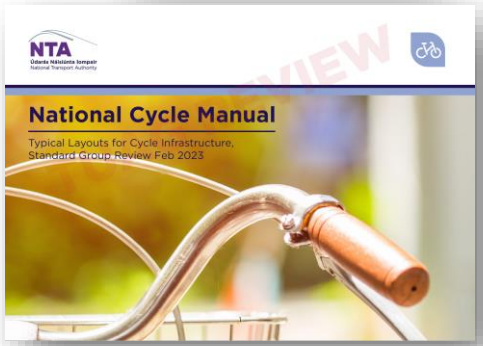
Standards & Design Guidance

Three Main Documents

- The Treatment of Transition Zones to Towns and Villages on National Road
- Design Manual for Urban Roads & Streets
- National Cycle Manual *(Draft!)*







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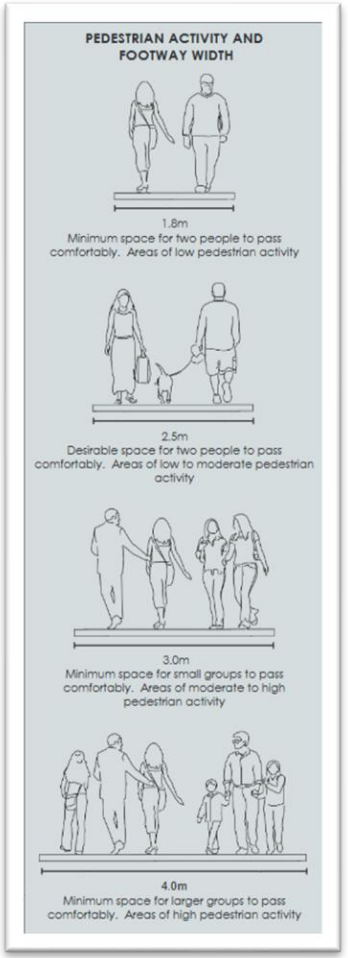
Safety for Vulnerable Road Users

Safety For Vulnerable Road Users

Facilitating Safe Pedestrian Environments

- How have vehicle speeds been managed?
- Has sufficient segregation been provided?
- Have footpaths and crossings been aligned with pedestrian desire lines?
- Aim for maximum widths not minimum widths for footpaths



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Safety For Vulnerable Road Users

Facilitating Safe Cycling Environments

- Is the design legible?
- How have cyclists been integrated with other modes?
- How have left turning HGV risks been managed?
- Level of segregation > appropriate for traffic speed?

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Pedestrians & Cyclists

Share or Segregate (it's complicated)?

- Collect a strong evidence base (rich data & extensive observations)
- When you have high cycling demand, segregate where street constraints allow
- Accept that in some instances you won't have space to segregate
- Carefully engineer (essential) shared spaces to afford advantage to the pedestrian

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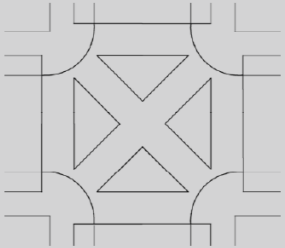
Safety at Junctions

Safety at Junctions

Key: Visibility & Legibility

- Are priorities for all users well defined?
- How have HGV's been managed (omit left turn slips)?
- Are the *corner radii appropriate?



Signalised junction with all-round pedestrian phase crossing. Areas of high pedestrian and vehicular activity.

*Corner radii – reduce pedestrian crossing distances, reduce vehicle speeds, allow large vehicles to cross centrelines.

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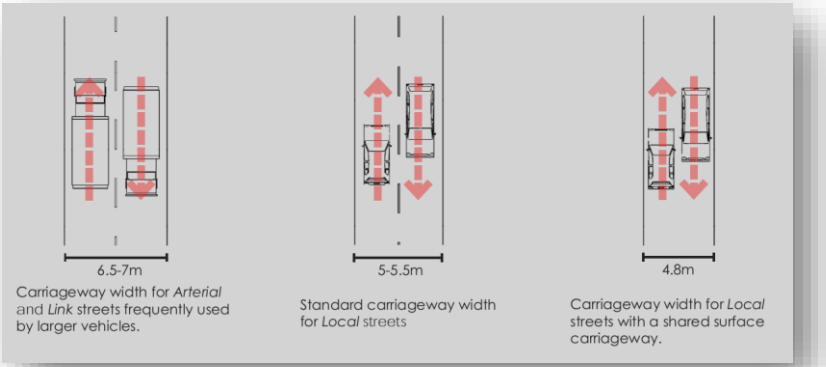
Managing Speed with Lane Width

Lane Width

Most Effective Measure to Calm Traffic

- Are lane widths correct for the context and the function of the road or street?
- What is the proportion of pedestrians, cyclists and large vehicles?
- How have width restrictions at pinch points been managed?



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Common Safety Problems

Common Safety Problems

Pedestrian Crossings

- Traffic signal controlled crossings for high flows
- Zebras for moderate flows - raise them
- Courtesy crossing / informal crossing - raise them
- Align with pedestrian desire lines & minimise crossing distance

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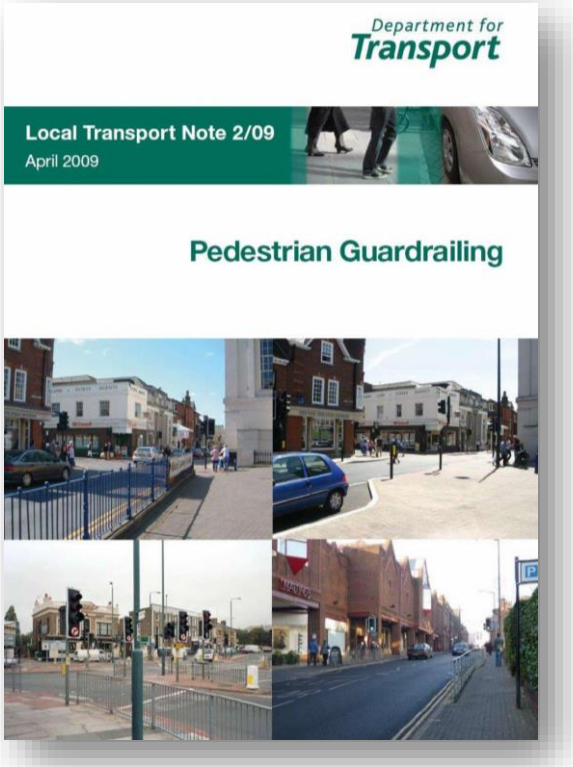
Common Safety Problems

Pedestrian Guard Railing (PGR)

- No conclusive evidence that PGR improves safety performance.
- PGR can create hazards for vulnerable road users.
- Instead of attempting to forcibly control pedestrian activity, focus attention on controlling the behaviour of drivers at high risk locations.



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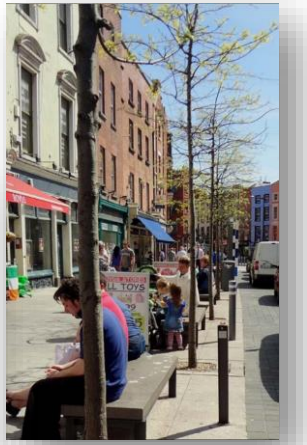
Common Safety Problems

Street Furniture

- Contrast with pavement materials
- Minimize clutter
- Careful not to create pinch points
- Cycle stands – set back & footpath blocking
- Use unallocated space to consciously create attractive places for people to gather safely



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Common Safety Problems

Parking & Loading

- Avoid diagonal / angled parking
- Perpendicular parking is for housing estates and car parks only
- Wide footpaths can be used for time-restricted loading
- Check parking and loading doesn't impact negatively on pedestrian crossings and junctions

Figure 4.80: Example from Walworth Road, London, UK, where a loading bay, provided within a verge, can revert to pedestrian space when not used.

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Common Safety Problems

Materials & Finishes: Contrast Contrast Contrast

- Use to define segregation, calm traffic & improve legibility
- Will reduce need for PGR, signing & lining
- Use change in colour to highlight gateways, transitions or pinch points
- Golden Rule: Pavements light / roads dark (limit palette – can be low cost)

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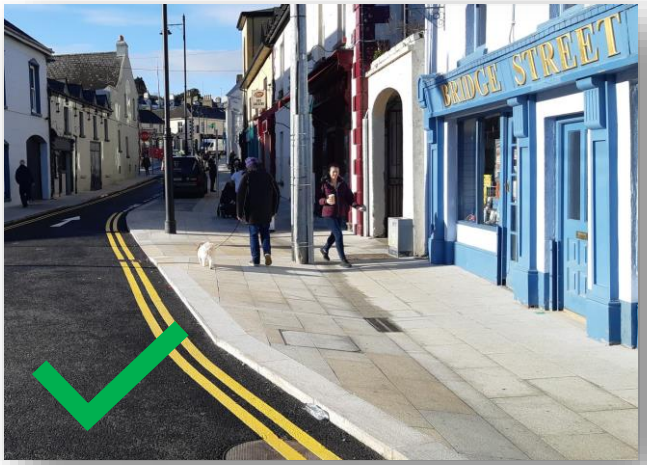
Common Safety Problems

Drainage – Why is it so Important?

- Linear drains – OK for patios
- Beany block – cheap to install, costly to maintain
- Concrete channels – create difficulties for the mobility impaired
- Instead engineer gentle cross falls and create drainage ‘creases’ or flat channel areas in footpaths



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Recap

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Recap

What did we cover?

- Design Speed / Severity
- Standards & Design Guidance
- Safety for Vulnerable Road Users
- Safety at Junctions
- Managing Speed with Lane Width
- Common Safety Problems

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Road Safety in Public Realm & Active Travel Schemes

Thank you for listening.

Any questions?

Still Not Me.