



25 NOVEMBER 2019

Continuous Footways

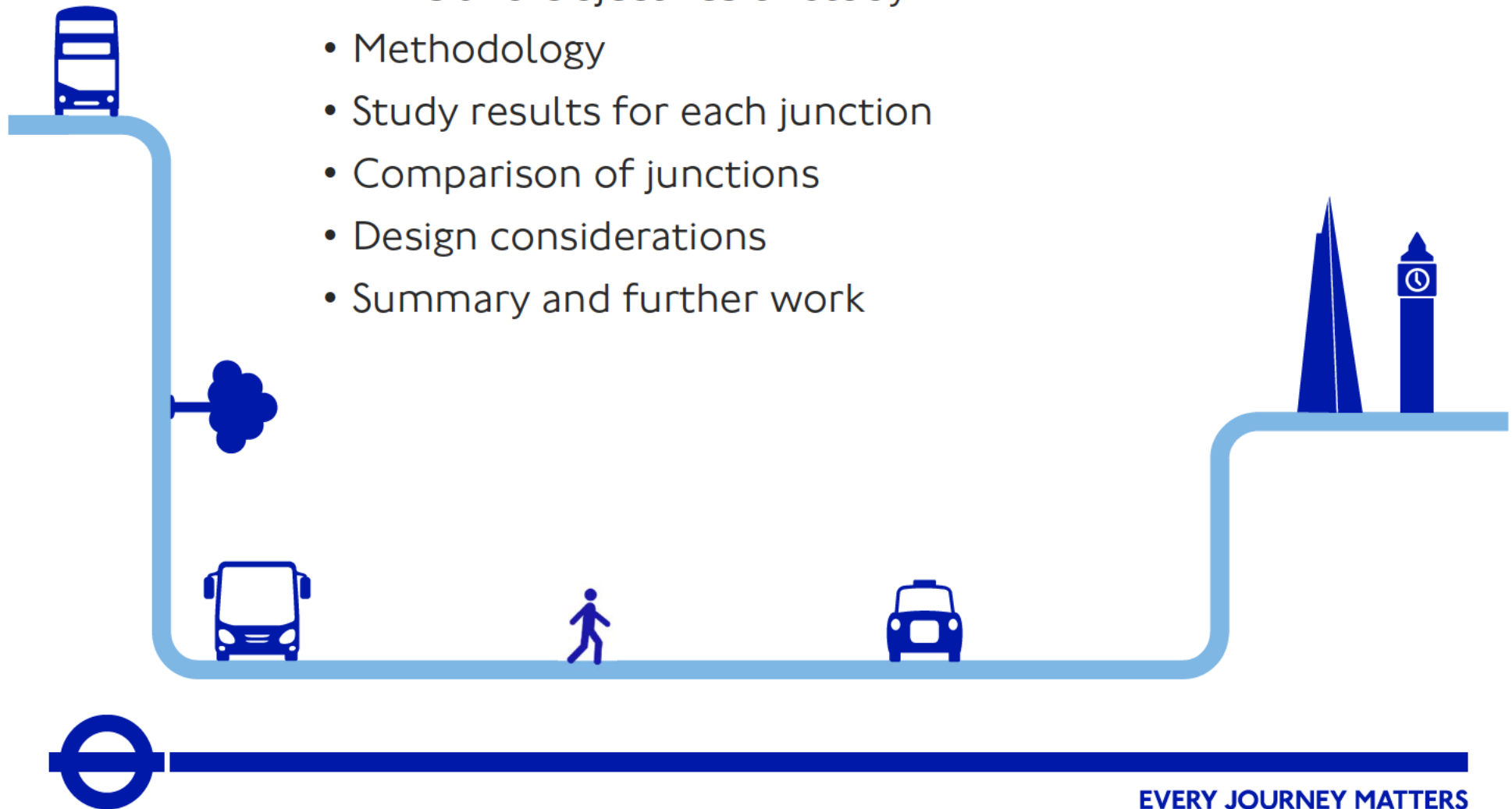
Jacqui Stone



EVERY JOURNEY MATTERS

Agenda

- Aims and Objectives of Study
- Methodology
- Study results for each junction
- Comparison of junctions
- Design considerations
- Summary and further work



Study Aims and Objectives




- To assess the suitability of continuous footways for a range of junction conditions
- To indicate if driver and pedestrian behaviours can be altered by changes in priority junction layouts



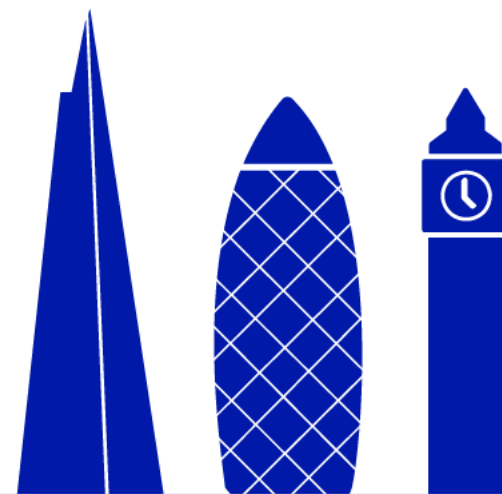
Survey Methodology

Pedestrian / driver interactions

Level of interaction	Pedestrian location 	Driver behaviour					
		Driver proceeds through junction	Driver slows or stops but not in a way that invites pedestrian to cross (e.g. stops with vehicle across footway, stops part-way through making turn)		Driver slows or stops to make turn		
high	Already crossing junction	a1: Ped retreats	a: Pedestrian doesn't modify behaviour	b1i: Ped continues to cross	b1ii: Ped retreats	c1i: Ped continues to cross	c1ii: Ped retreats
	At junction edge	a2: Ped has to modify behaviour, e.g. check step, divert		b2i: Ped waits until vehicle has moved off	b2ii: Ped crosses but diverts around vehicle	c2i: Ped crosses	c2ii: Ped does not cross; driver proceeds
	Not yet at junction	a3: Ped waits		b3i: Ped waits until vehicle has moved off	b3ii: Ped crosses but diverts around vehicle	c3i: Ped crosses	c3ii: Ped does not cross; driver proceeds
low							
		Level of priority for pedestrian					
		low			high		



Dropped Kerbs





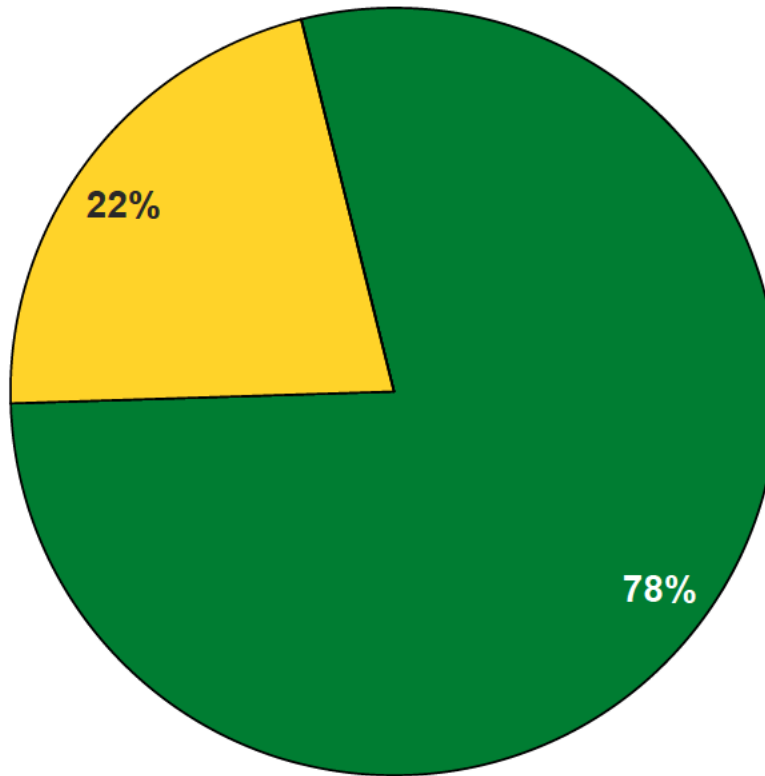
[Video 1](#)

Clapham Park Rd junction with Holwood Pl

- Dropped Kerb with tactile paving
- Two-way



Percentages of Interaction Categories



■ Green Total ■ Yellow Total ■ Red total

Top 5 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	b3ii	47	37.6%
2	a2	18	14.4%
3	a3	12	9.6%
4	a	11	8.8%
5	c2i	9	7.2%





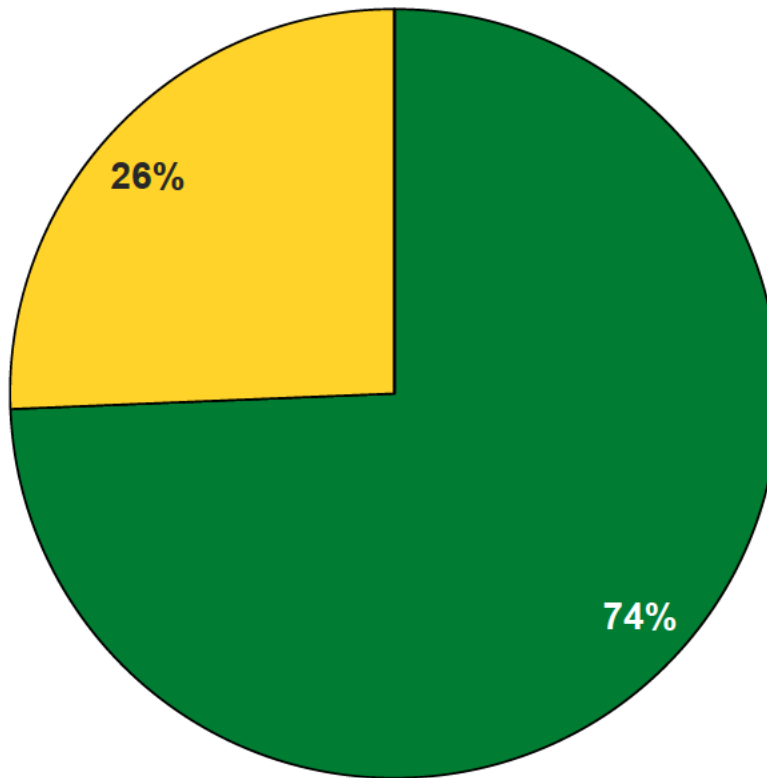
[Video 2](#)

Kennington Rd junction with Walcot Square

- Dropped kerb without tactile paving
- Two way



Percentages of Interaction Categories



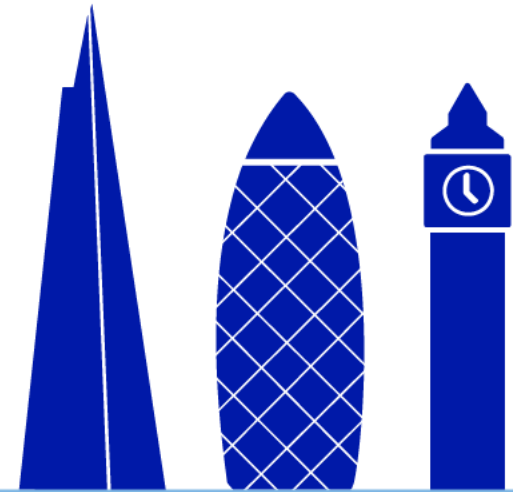
■ Green Total ■ Yellow Total ■ Red total

Top 5 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	b3ii	18	46.2%
2	a2	6	15.4%
3	b2ii	4	10.3%
3	c1i	4	10.3%
5	c2i	3	7.7%



Raised Entry Treatments





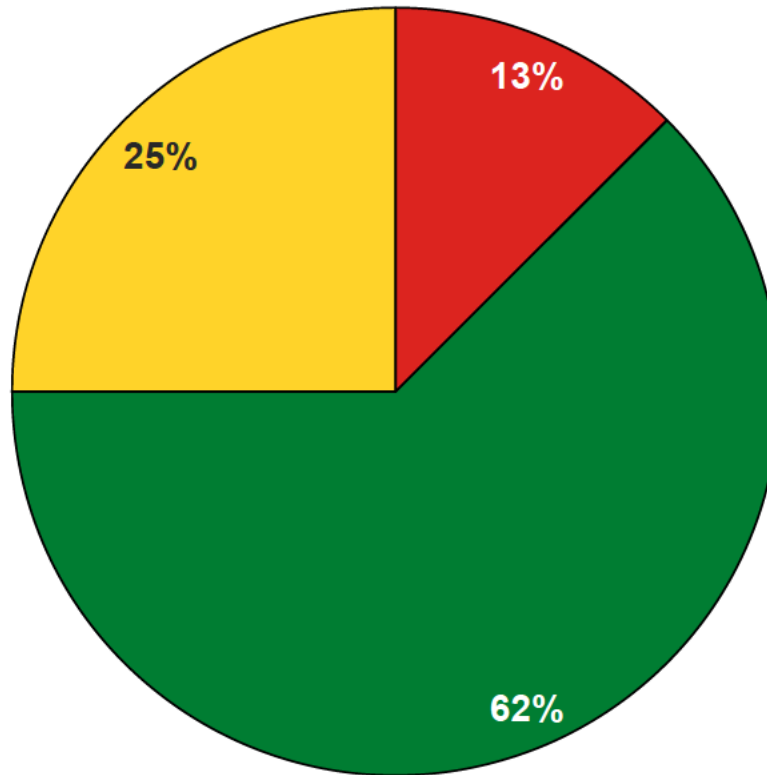
[Video 3](#)

St George's Rd Junction with Colnbrook St

- Raised Entry Treatment
- Narrowed
- One-way right turn exit only
 - Across bi-directional cycle track



Percentages of Interaction Categories



■ Green Total ■ Yellow Total ■ Red total

Top 5 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	a	2	25.0%
1	b2ii	2	25.0%
3	a1	1	12.5%
3	a3	1	12.5%
3	b3ii	1	12.5%
3	c2i	1	12.5%





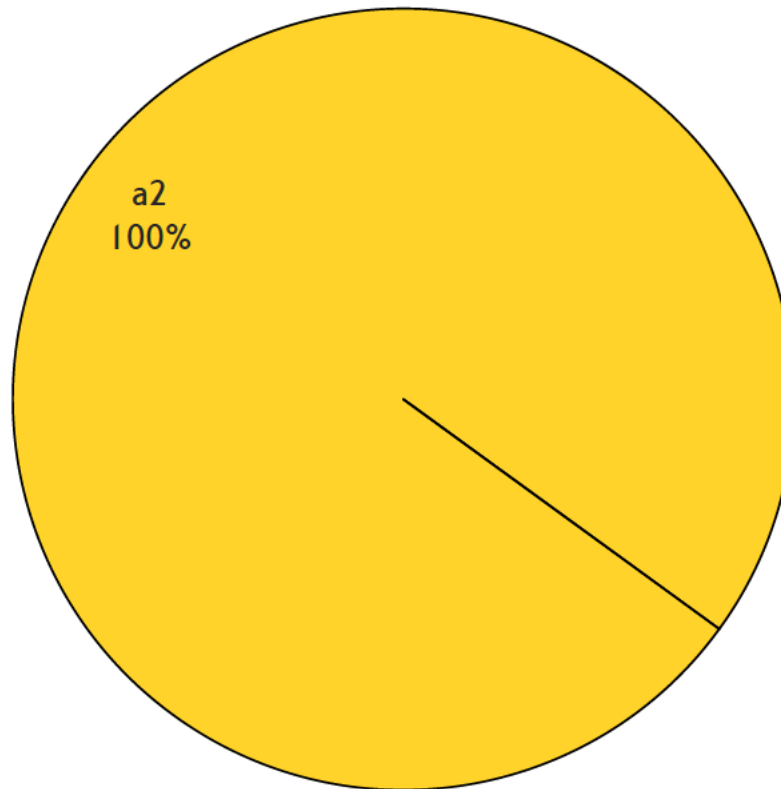
[Video 4](#)

St George's Rd Junction with Gladstone St

- Raised Entry Treatment
- Narrowed
- One-way right turn entry only
 - Across bi-directional cycle track



Percentages of Interaction Categories



Note: there were only 2 interactions observed at this junction

■ Green Total

■ Yellow Total

■ Red total





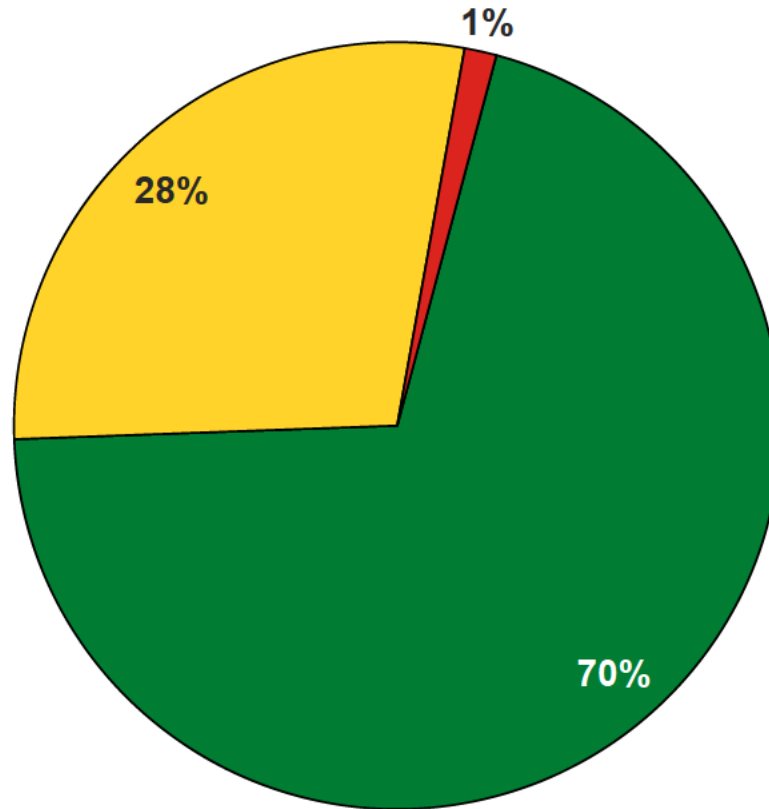
[Video 5](#)

A3 Clapham Rd junction with Crewsdon Rd

- Raised Entry Treatment
- Two way
- Cycle lane on main road



Percentages of Interaction Categories



■ Green Total ■ Yellow Total ■ Red total

Top 5 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	b3ii	99	44.6%
2	a2	34	15.3%
3	c3i	24	10.8%
4	b2ii	14	6.3%
5	c2i	11	5.0%





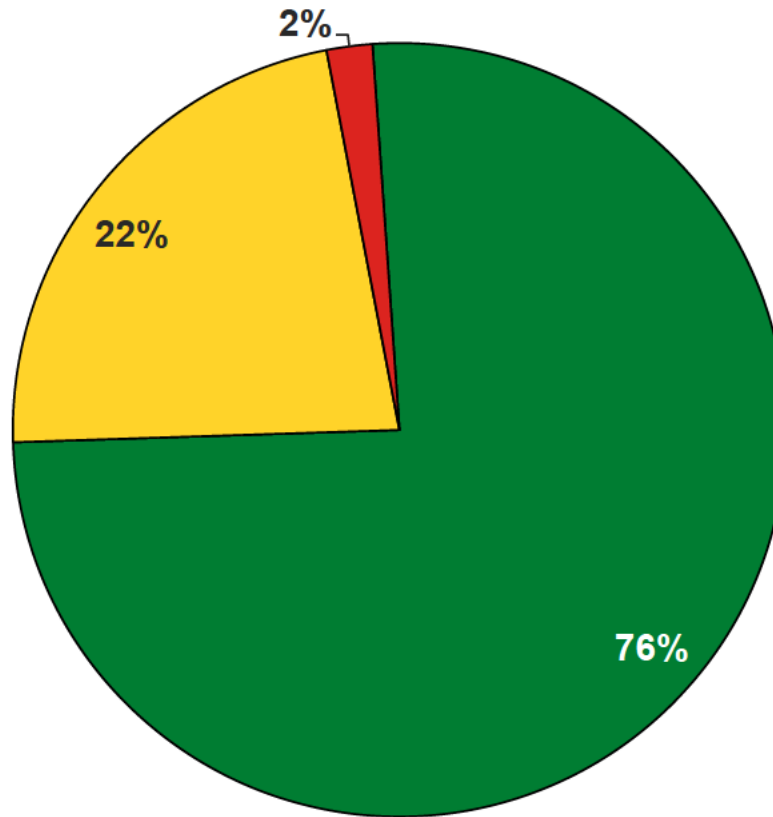
[Video 6](#)

Clapham High St junction with Venn St

- Raised entry treatment
- Left turn entry only
- High pedestrian flows
- Low vehicle flows
- Cycle lane on main road
- Contraflow cycle lane on side road



Percentages of Interaction Categories



■ Green Total

■ Yellow Total

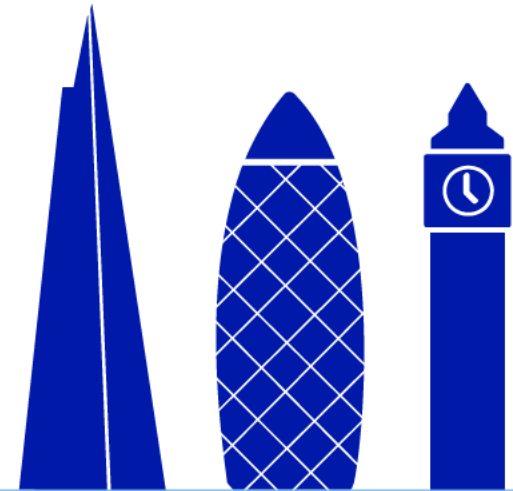
■ Red total

Top 5 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	c1i	52	24.9%
2	a3	48	23.0%
3	a2	47	22.5%
4	c3i	19	9.1%
5	c2i	12	5.7%



Continuous Footways





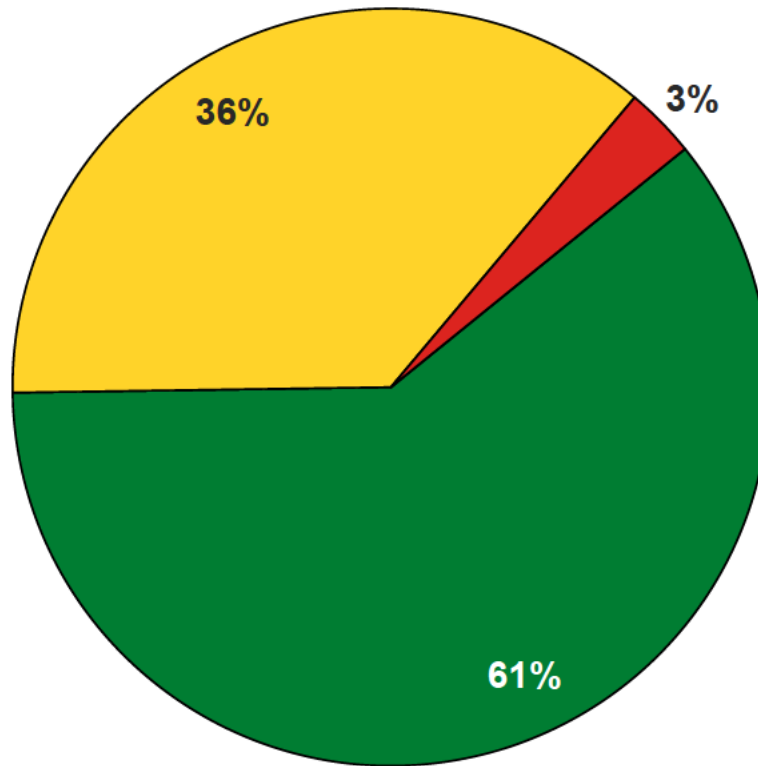
[Video 7](#)

Old Town junction with Orlando Rd

- Continuous footway
- Two-way
- Banned right turn exiting side road
- Narrowed mouth of junction



Percentages of Interaction Categories



■ Green Total

■ Yellow Total

■ Red total

Top 4 Interaction Categories

	Category	Number of interactions	Percentage of interactions
1	a2	16	24.2%
2	c1i	11	16.7%
3	b3ii	10	15.2%
4	a3	9	13.6%





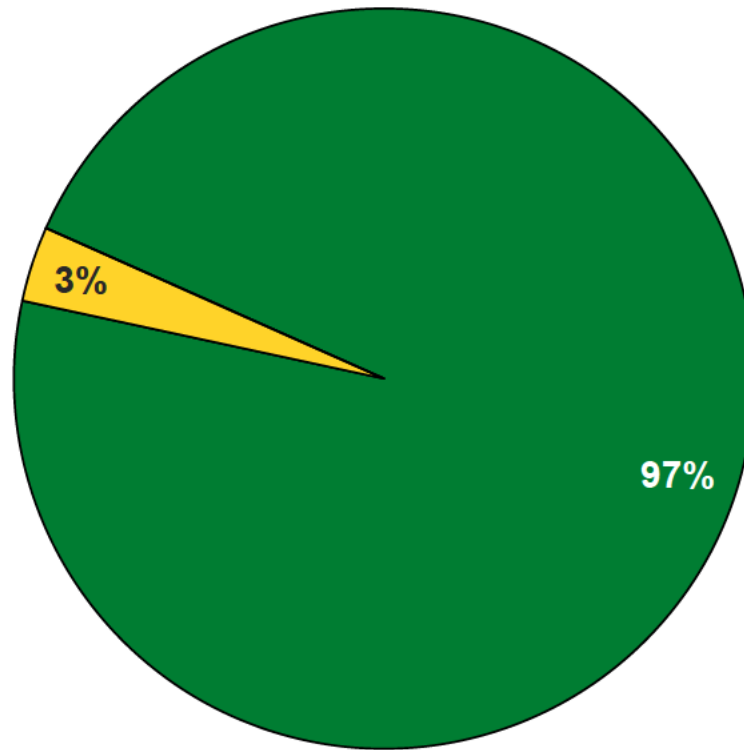
[Video 8](#)

The Pavement junction with Bromell's Road

- Continuous Footway
- One way
- Left turn exit only
- Restricted sight lines



Percentages of Interaction Categories



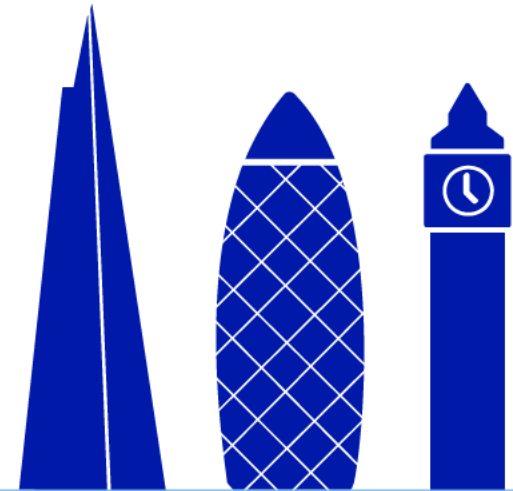
■ Green Total ■ Yellow Total ■ Red total

Top 5 Interaction Categories

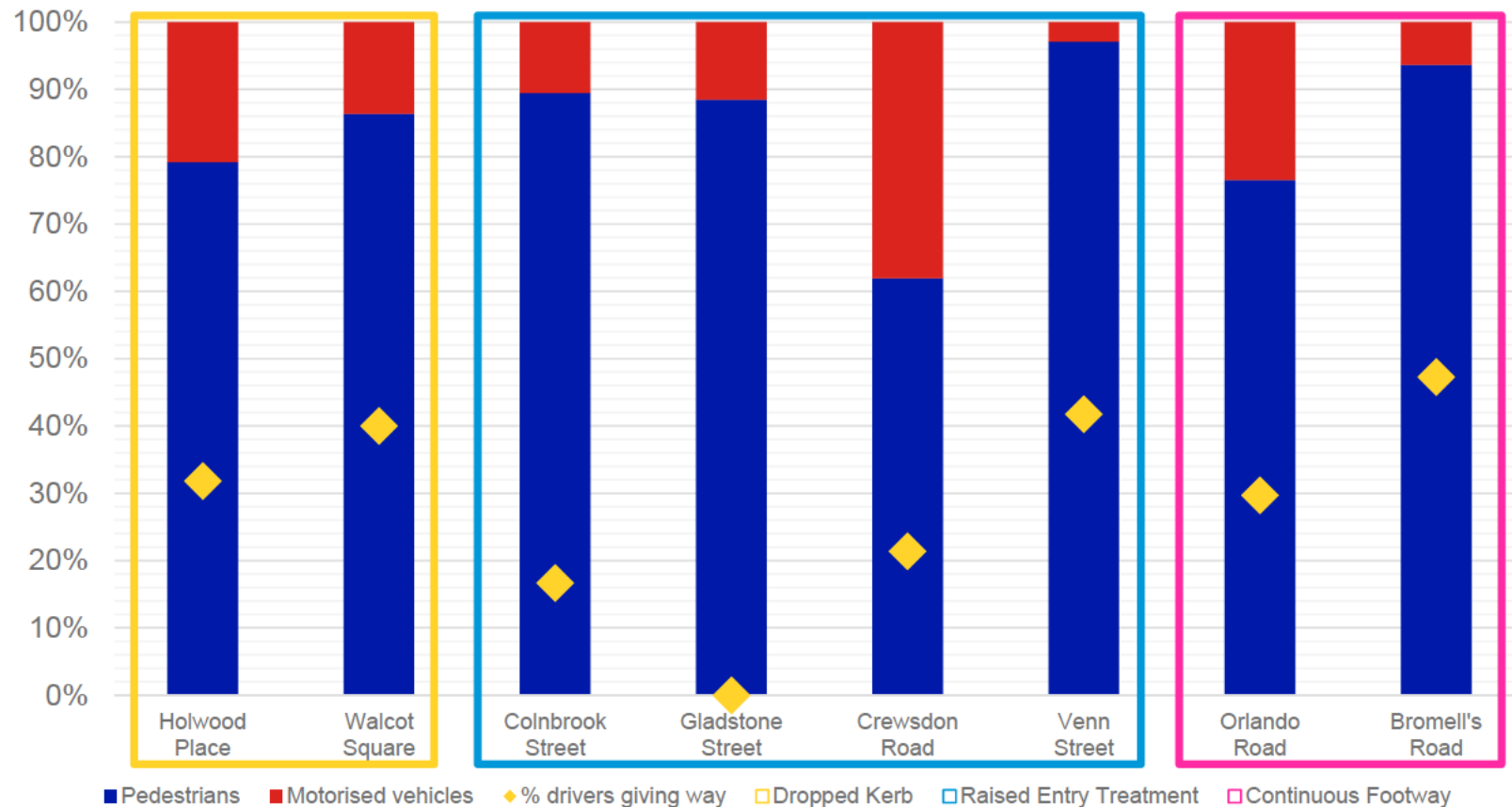
	Category	Number of interactions	Percentage of interactions
1	b3ii	440	45.2%
2	c3i	239	24.6%
3	c2i	136	14.0%
4	c1i	74	7.6%
5	b3i	28	2.9%



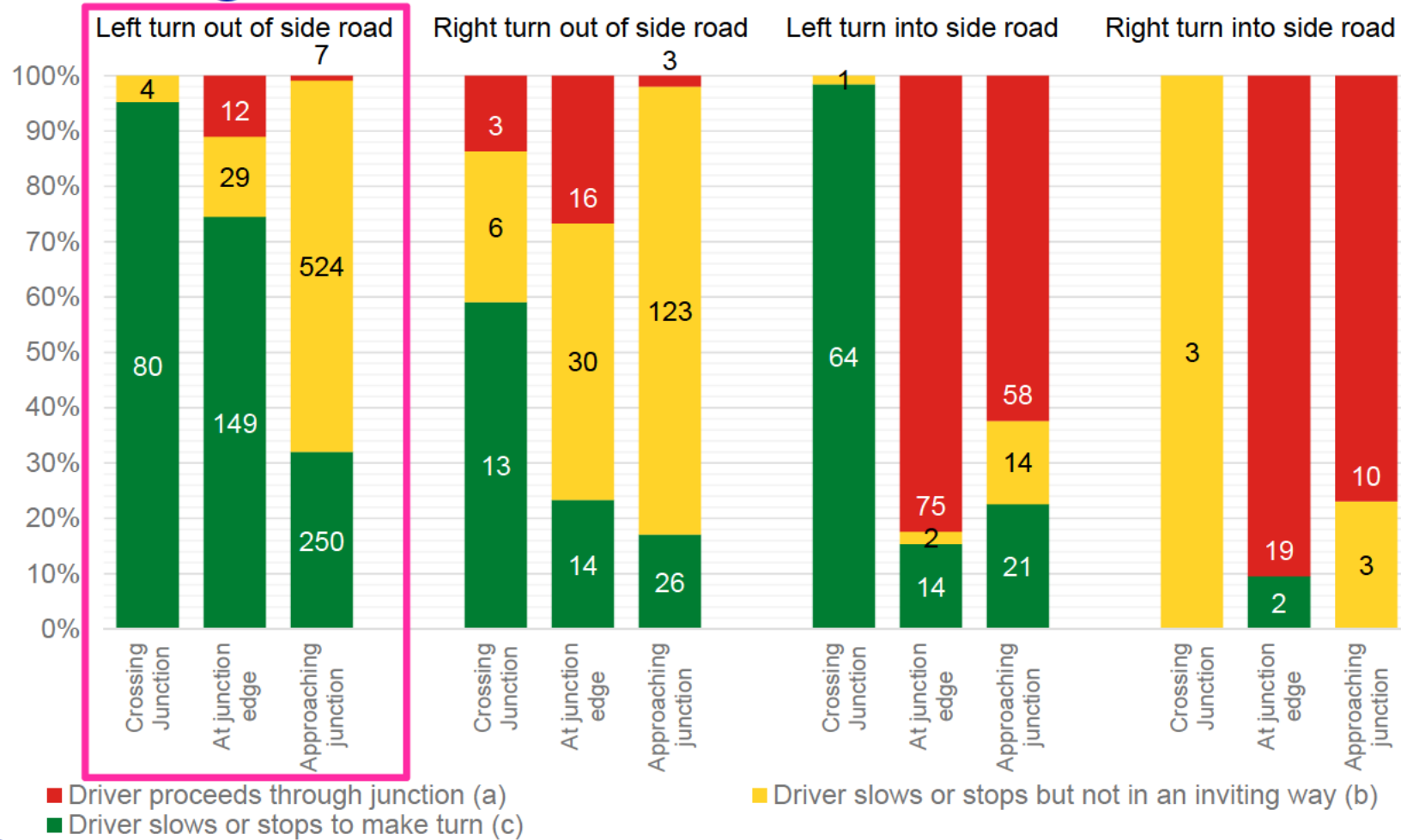
Junction comparisons



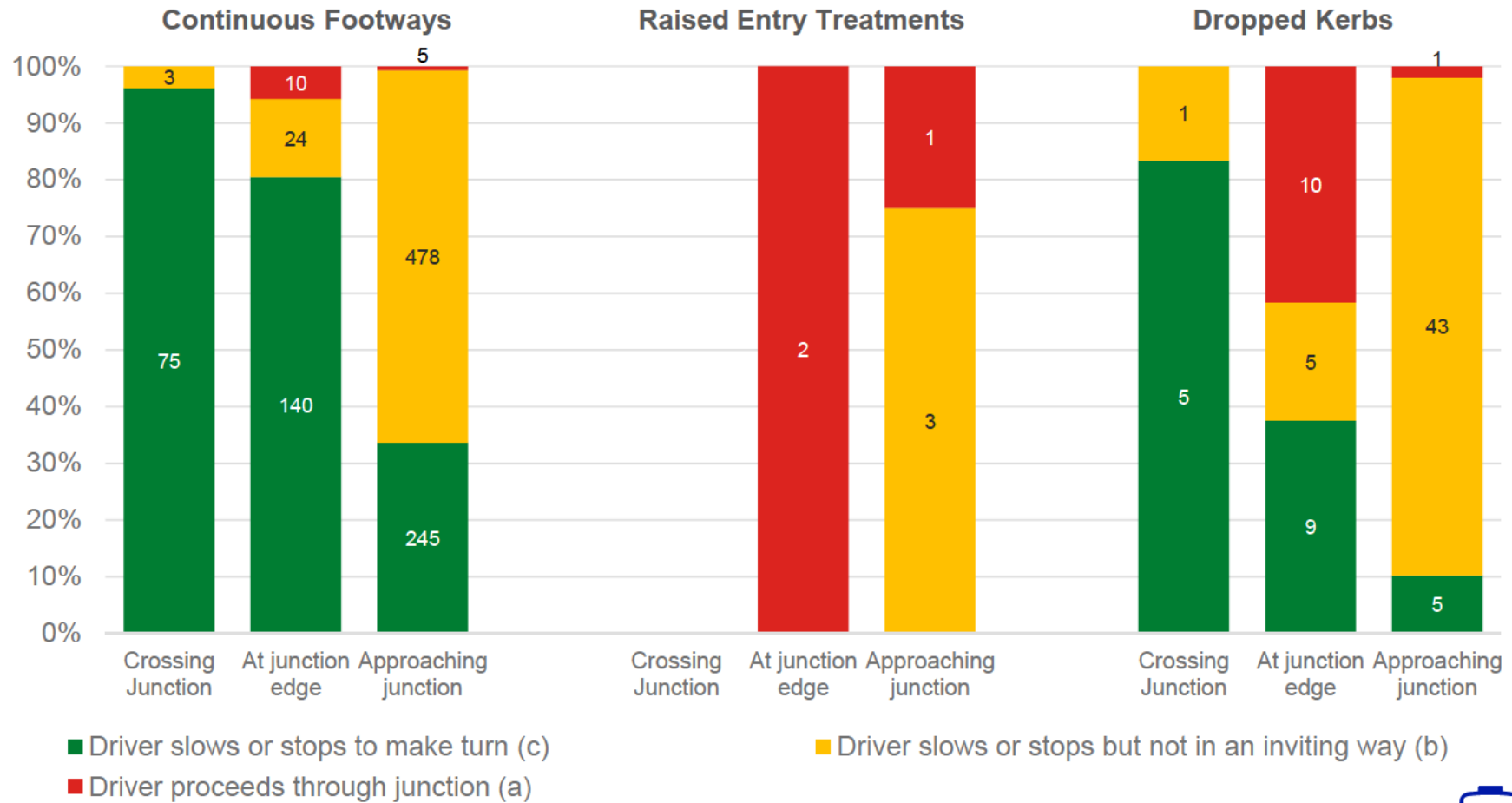
Percentages vehicles and pedestrians, compared to percentages of drivers giving way to Pedestrians



Percentages of drivers giving way for different turning movements



Percentages of drivers giving way when turning left out of the side road



Left turn exit – Dropped Kerb

[Video 9](#)



Left turn exit – Raised Entry Treatment

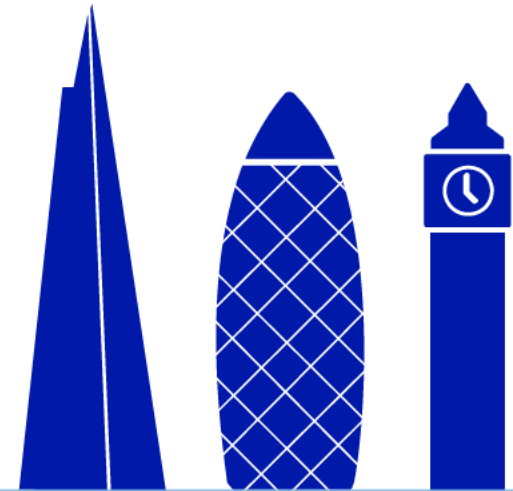
Video 10

Left turn exit – Continuous Footway

[Video II](#)



Continuous Footway Design Considerations



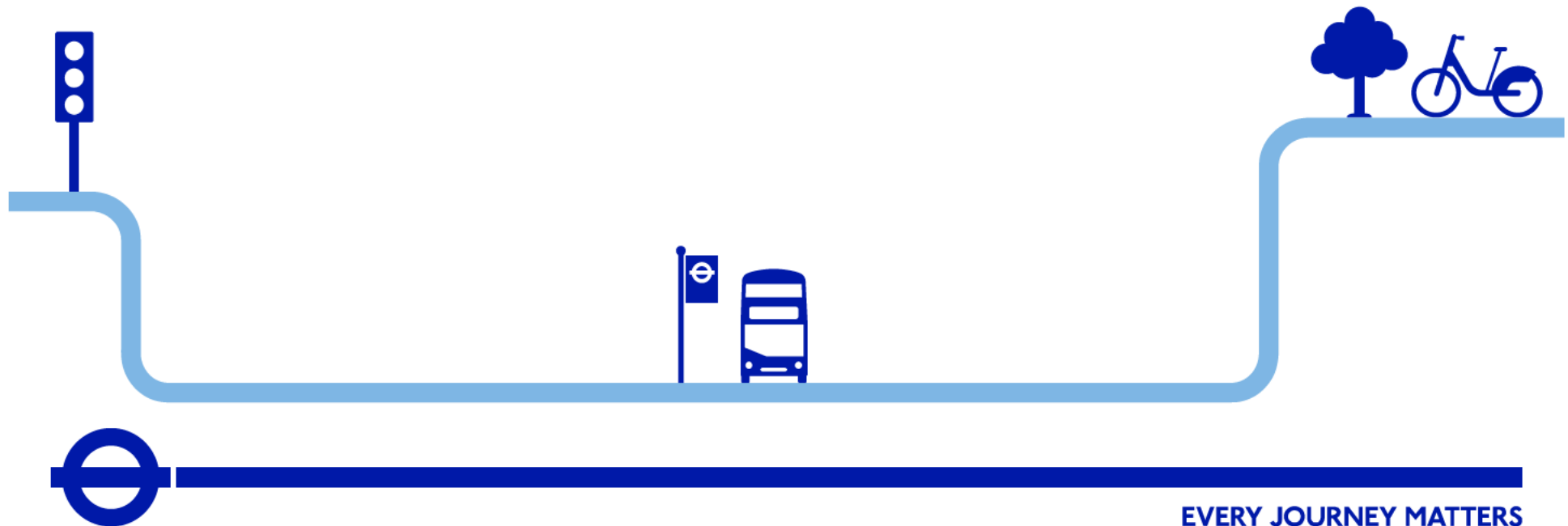
Steer Davies Gleave Study (2018)

Drivers more likely to give way when:

- Higher pedestrian volumes
- Exiting side road
- Turning left

Design factors:

- Ramp with give way line
- Footway depth
- Tight corner radii with vertical deflection





Design Features

- Straight or curved kerbs to denote side road location
- Setback and clarity of give way markings
- Material choice
- 20mph
- Low numbers of heavy vehicles
- No bus routes



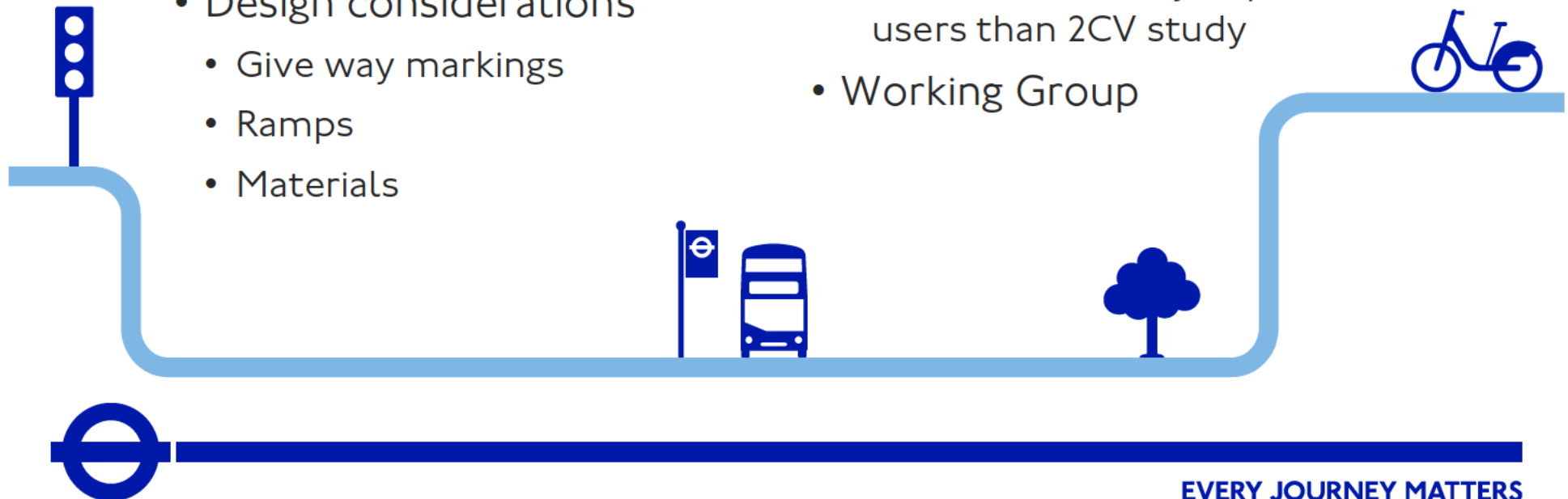
Conclusions

Summary

- Continuous footways may provide increased priority for pedestrians
 - Left turn out of side street
 - High pedestrian volumes
- Design considerations
 - Give way markings
 - Ramps
 - Materials

Further Work

- Diversity and Inclusivity - EqlA
 - Requires tactile paving or alternative
 - More detailed qualitative studies of visually impaired users than 2CV study
- Working Group





Contact

Jacqui Stone: [REDACTED]tfl.gov.uk

Korak van Tuyl: [REDACTED]tfl.gov.uk



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