

Portsmouth Inspiration Study

A2047 London Road

*'This Inspiration Study is a little opportunity to think **BIG** about how to make walking and cycling easy, attractive,*

and safe for everyone.'

Why Infrastructure? London, November 2018

October 2018

we are
cycling
UK

Witteveen + Bos

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Initials

iWalk - innovations in inclusive walking

https://issuu.com/witteveenbos/docs/iwalk_wb

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Portsmouth is a vibrant and growing coastal city with big city challenges of congestion and air pollution.

*What do we need to do to ensure Portsmouth stays an attractive place to live, work, visit and study?
Can we tackle congestion and air pollution to help the city thrive?*

→ *36% of children in Portsmouth show indications of potential metabolic disease.*

→ *Children and babies in Portsmouth smoke equivalent of 550 cigarettes / year due to air pollution.*

References: Public Health Outcomes Framework (2018) 2.06ii. Available at: <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000042/pat/6/par/E12000008/ati/102/are/E06000044>

Particulate Matter PM2.5s for 12.28ug/m3 annual mean, London Road C2 (Portsmouth City Council, 2018) Air Quality Annual Status Report.

Cigarette reference is a crude estimate only based on Pope et al. (2009); This assumption is based on legal levels of PM2.5s only.

Which type of air pollution is responsible for more deaths in the UK?

a) Illegal levels of NO₂s

*b) Legal levels of particulate matter
PM_{2.5}s*

Most of Portsmouth lies within cycling distance of the city centre, and there is great potential for local walking.

Note: these dotted lines represent as-the-crow-flies isochrones, which give us a quick overview of the potential for walking and cycling.



The A2047 is a 5km/3mi north-south corridor which has community as well as transport importance:

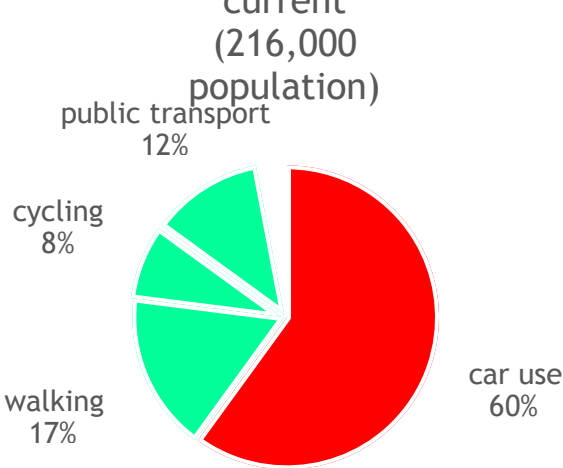
- + Community assets (shops, cafes, bus stops)
- + Proximity to local residential areas and city centre
- + Existing public transport routes
- + Interesting architecture



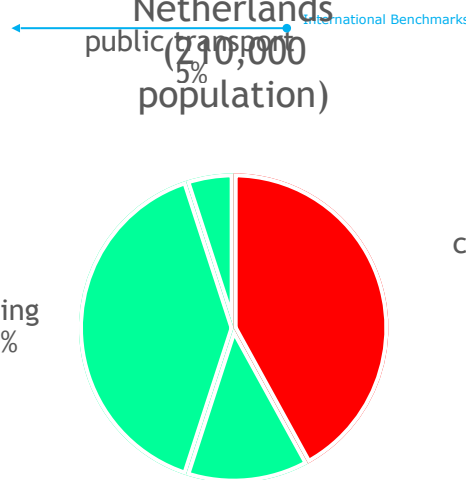
- Congestion
- High air pollution
- Traffic safety issues
- Inconsistent footway quality
- Lack of cycling infrastructure
- Lack of green space

Portsmouth Inspiration Study: London Road A2047

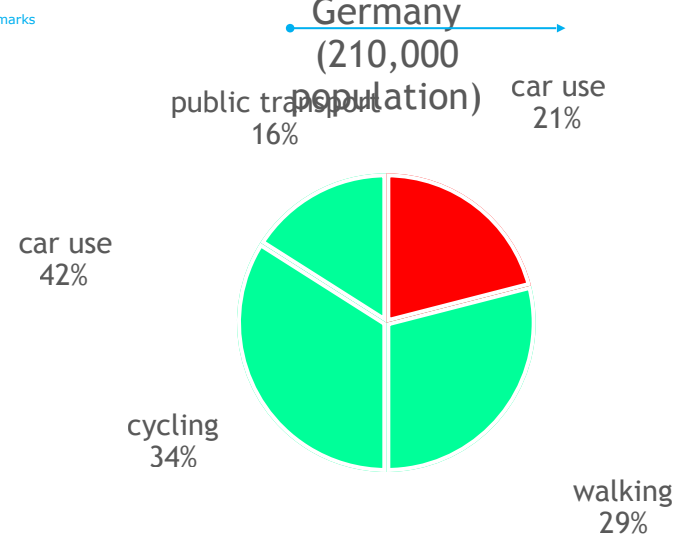
A main high street section runs for 450m from Stubbington Avenue to Kingston Crescent, however the high street/community character extends beyond this to the north and south.



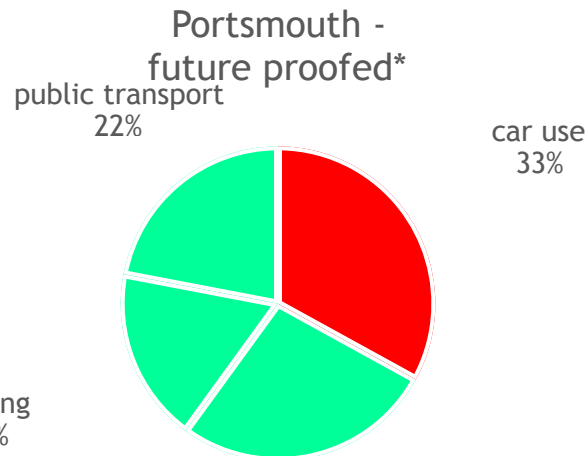
Healthy transport
= 37%



Healthy transport
= 58%



Healthy transport
= 79%



Healthy
transport
= 67%

References: Population and projected growth to 2028, Office of National Statistics (2018). Data for Portsmouth modal share derived from Census 2011. Data for Eindhoven and Freiburg from <http://www.epomm.eu/>. The "future-proofed" scenario assumes 1% modal shift per year over a decade each respectively to walking, cycling, and public transport, with a corresponding decrease in car use modal share. Portsmouth Inspiration Study: London Road A2047

High Level Capacity Analysis - modal shift

London Road A2047 → **12,000 vehicles per day**

Add walking and bus passengers → **22,000 people per day**

Allow for 5% projected growth to 2028

	Current *		5% growth		Future- proofed **	
Mode	Trips		Trips		Trips	
Cars	10,923	49%	11,469	49%	4,356	19%
OGVs	1,138	5%	1,195	5%	1,195	5%
HGVs	53	0%	56	0%	56	0%
Public Transport	5,327	24%	5,594	24%	7,944	34%
Walking	4,450	20%	4,673	20%	7,009	30%
Cycling	359	2%	377	2%	2,804	12%
Total	22,251	100%	23,363	100%	23,363	100%

Population and projected growth to 2028, Office of National Statistics (2018).

Data for Portsmouth modal share derived from Census 2011. The 'future-proofed' scenario assumes 1% modal shift per year over a decade each respectively to walking, cycling, and public transport, with a corresponding decrease in car use modal share. Please see following pages for more detailed assumptions.

Healthy
transport

46%

46%

76%

Existing:



View north from Kingston Crescent towards the Tap pub/Chichester Avenue

Image: Google Street

Is your child safe spending time on this High Street?

we are
cycling
UK

Witteveen + Bos

Proposed → Healthy Transport Corridor



View north from Kingston Crescent towards the Tap pub/Chichester

"This is a High Street we can all share!"
Portsmouth Cycle Forum

Proposed → Healthy Transport Corridor

More movement and more place.

Improve walkability with zebra crossings and continuous level crossings

Connections parallel cycle street →

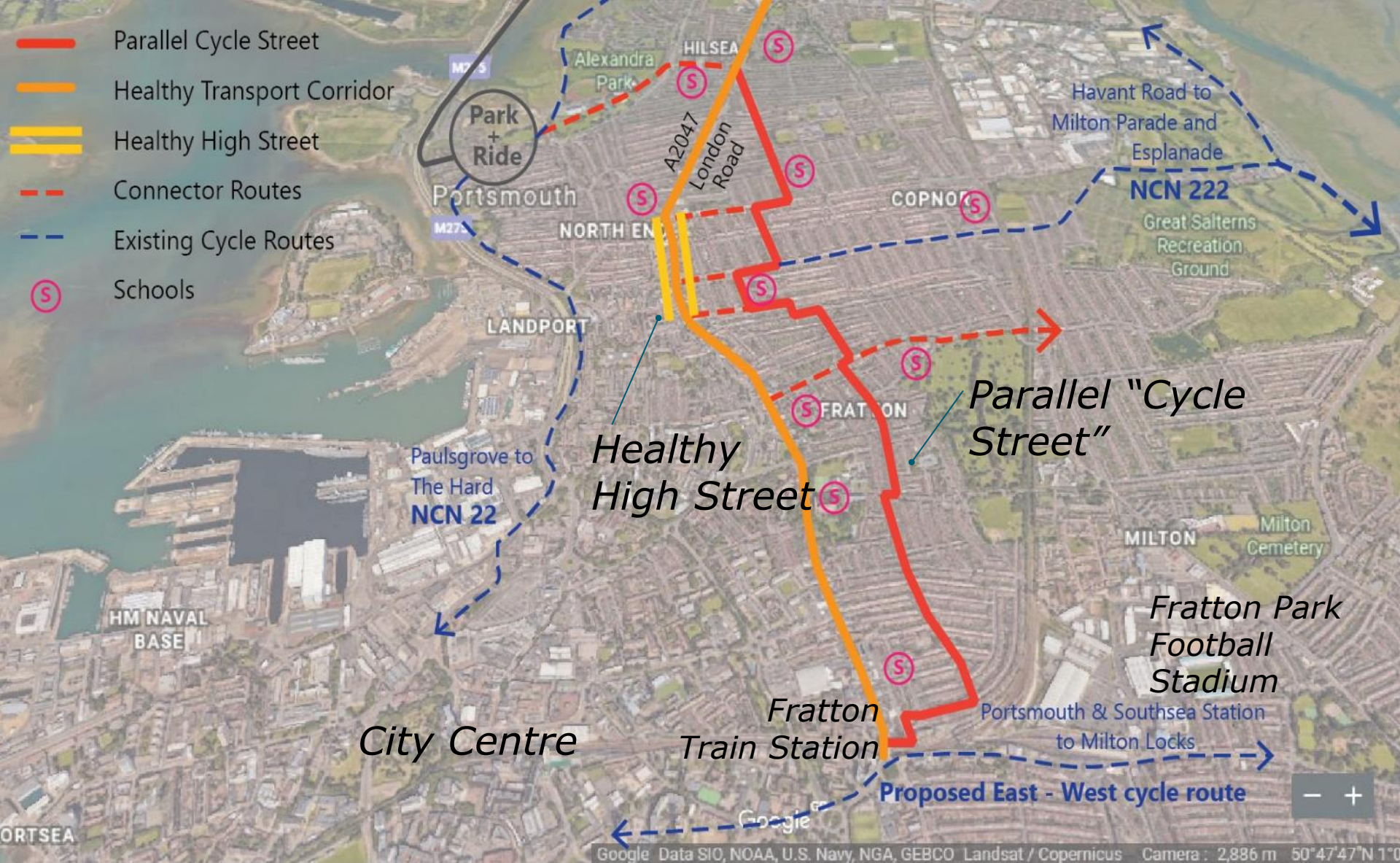
Asset zones on road side e.g. seating, planting, trees, cycle parking, raised level loading

Retain 2 lanes for buses, cycling permitted

Material wayfinding

Remove street clutter

1. Add continuous level footway cross-overs
2. Improve crossings by using zebra crossings at 80m intervals
3. Clear material wayfinding
4. Remove street clutter and consolidate street assets (bins, lighting etc)
5. Add placemaking elements e.g. parklets, seating, planting, trees, cycle parking where space allows (i.e. using one traffic lane)
6. Raised loading bays which extend the footway in use
7. Retain 2 lanes for bus and cycles
8. Reduce speed to <12 mph
9. Remove centre line
10. Add visual narrowing/rumble strips
11. Clear waymarking to parallel cycle street





Full specification parallel Cycle Street – a safe space for everyone



Full specification parallel Cycle Street – a safe space for everyone

High Level Capacity Analysis – displacement & modal shift

Scenario A - Healthy High Street			Scenario B - Transition Healthy High Street			Scenario C - Max Healthy High Street		
Mode	Trips	Share	Mode	Trips	Share	Mode	Trips	Share
Cars, total displacement	0	0%	Cars, 65% displacement	4,014	17%	Cars, total sovereignty	0	0%
OGVs, - 50% ecargo	598	3%	OGVs, - 50% ecargo	598	2%	OGVs, - 50% ecargo	598	2%
HGVs, same	56	0%	HGVs - same	56	0%	HGVs - same	56	0%
PT +50%	8,391	36%	PT +50%	8,391	35%	PT +75%	9,789	40%
Walking +50%	7,009	30%	Walking +50%	7,009	29%	Walking +75%	8,177	34%
Cycling +50% & 50% light freight	1,163	5%	Cycling +50% & 50% light freight	1,163	5%	Cycling +50% & 50% light freight	1,257	5%
Cycle Street, parallel	3,000	13%	Cycle Street, parallel	3,000	12%	Cycle Street, parallel	3,000	12%
M275	1,000	4%	M275	0	0%	M275	0	0%
A2030	1,000	4%	A2030	0	0%	A2030	0	0%
A288	1,000	4%	A288	0	0%	A288	0	0%
	23,216	100%		24,230	100%		22,877	94%

Reference **23,363** total trips allowing for 5% increase

Displacement onto rail is not assessed.

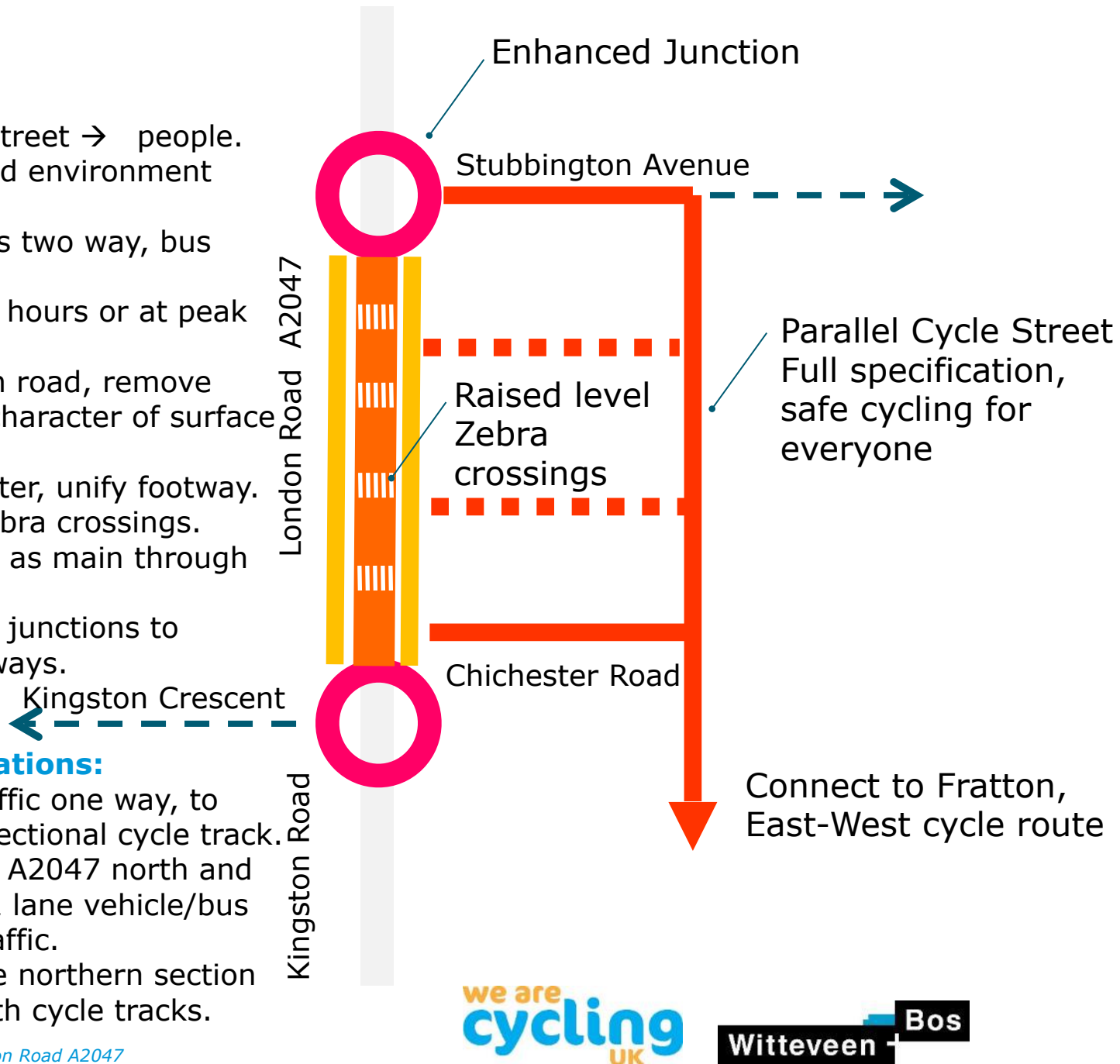


Headline concepts:

- + Prioritise the high street → people.
- + High flow, low speed environment <12mph.
- + Reduce to two lanes two way, bus traffic.
- + Traffic exclusion 24 hours or at peak times.
- + Visual narrowing on road, remove centre line, upgrade character of surface material.
- + Assets zone, declutter, unify footway.
- + Four raised level zebra crossings.
- + Parallel cycle street as main through route for cycling.
- + Upgrade secondary junctions to continuous level footways.

Additional considerations:

- + Alternative: bus traffic one way, to free one lane for bidirectional cycle track.
- + Potential to convert A2047 north and south of this area to 2 lane vehicle/bus traffic, 2 lane cycle traffic.
- + Potential to upgrade northern section Copnor Road A288 with cycle tracks.





Vans unload here early morning/evening,
available for footfall during day.

Raised Level Loading Bays, Camden High Street

Child cyclists are over 15 safer per mile cycled in the Netherlands compared to the UK.
Continuous level footway crossovers are key to providing greater safety for both cyclists and pedestrians.



Continuous level footways crossovers on side junctions.



Continuous level footways crossovers on side junctions.

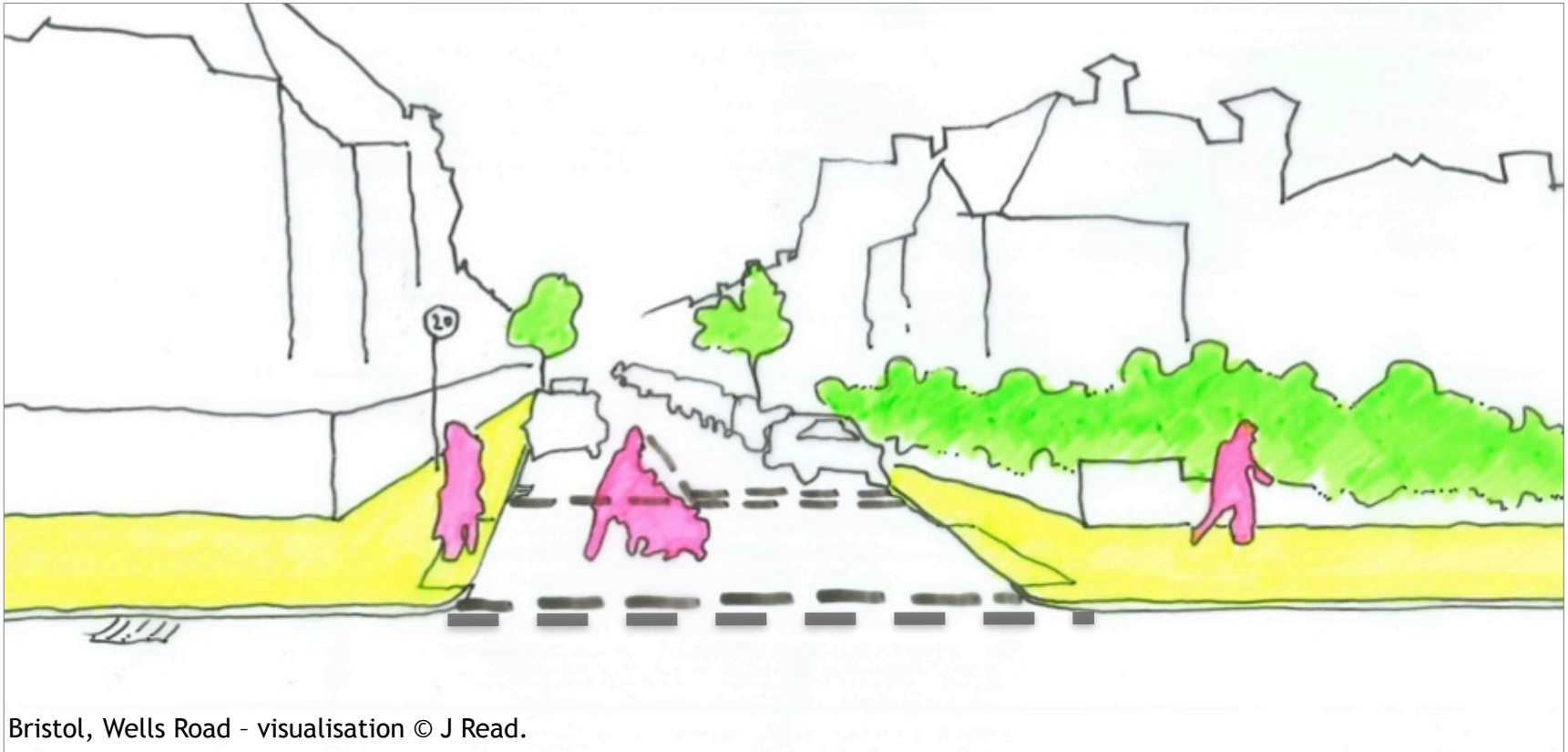


iWalk → 5. Continuous level crossings



Waltham Forest, London- 48 continuous level crossings have been installed in the borough [9]. Image: Waltham Forest.

iWalk → 5. Plan B – pulled back road markings



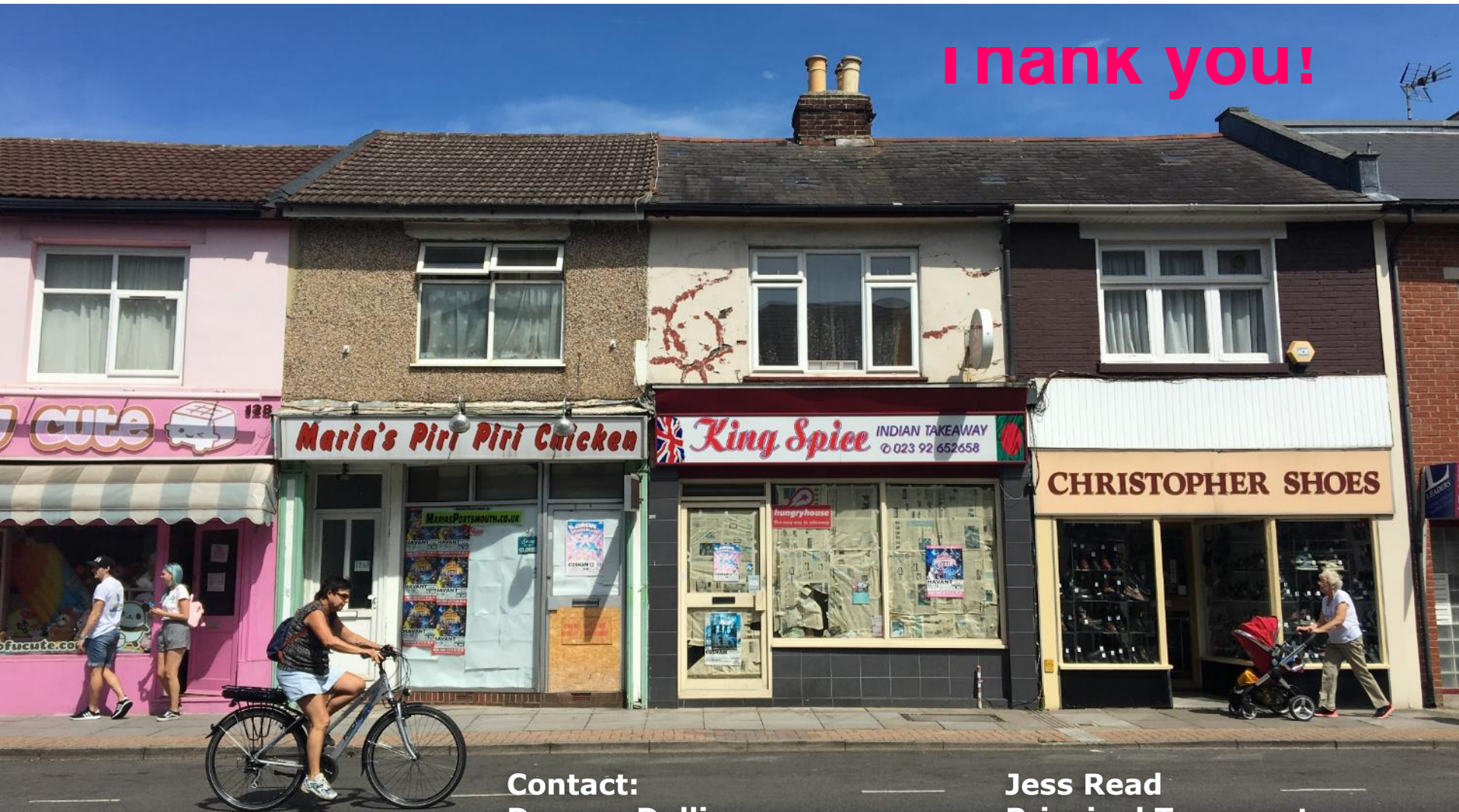
- **Can be rolled out during micro-asphalting.** In use across UK in individual contexts, e.g. Bristol, Weston-super-Mare, Hove, Oxford etc.
 - Strengthens the legal duty of care to give way to people walking.
- Cited in Irish National Cycle Manual.

iWalk → 5. Plan B – pulled back road markings



Gloucester Road, Bristol. Image: J Read.

I thank you!



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