



# Mark Philpotts Robert Weetman

Josef Whitfield (Manchester City Council)
John Dales (Urban Movement)

# Scope





"Side road junctions"

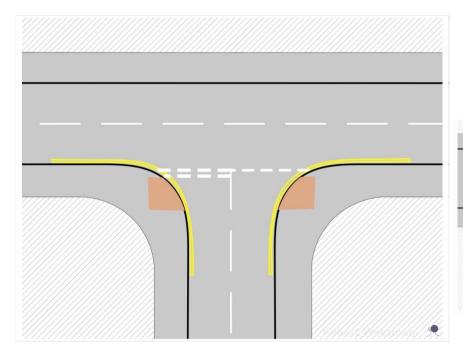
"priority junctions"

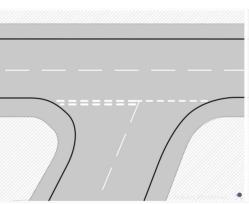
all the junctions that aren't signalised or roundabouts

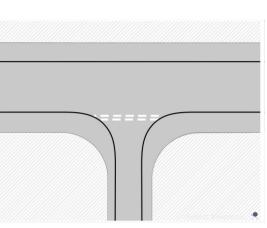
# Scope

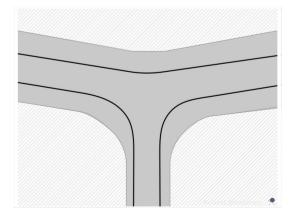




































### **Issues include**





## Need to better prioritise pedestrians

- current system not safe
- behaviour not in line with Highway Code
- lots of experiments
- front-line designers making network-level decisions

#### Lack of standardisation

- consequences for road users
- consequences for maintenance etc

# Highway code (H2/170) says...





"give way to pedestrians crossing or waiting to cross a road into which or from which you are turning. If they have started to cross they have priority, so give way"

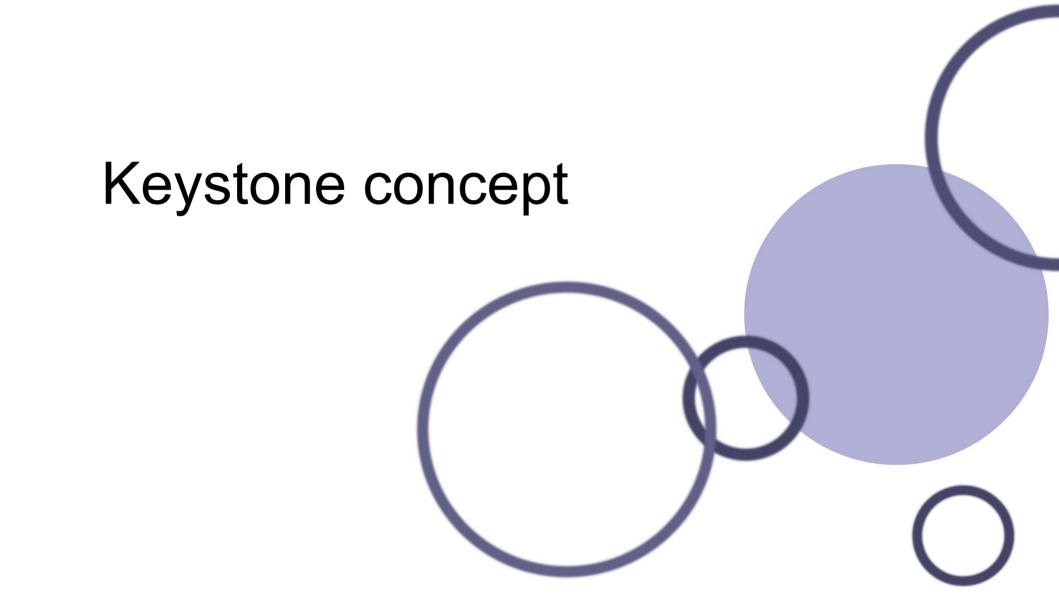




# How should junctions be designed so it will be <u>likely</u> that drivers obey Rule 170/H2 of the Highway Code?

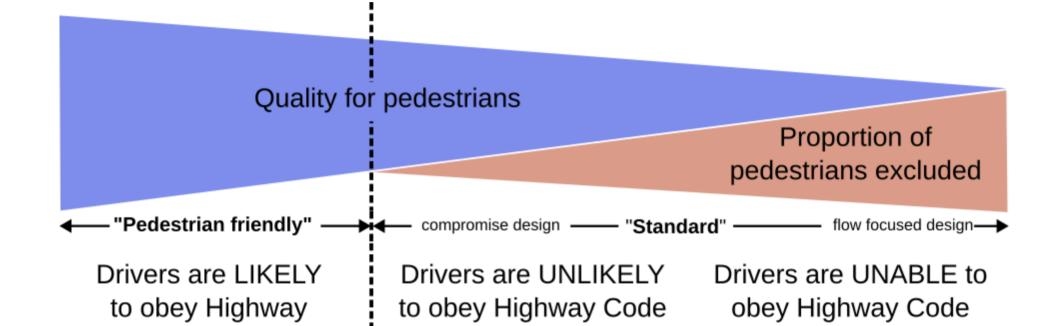
Optional: "But this will only work if..."

(Stick to design & don't talk about education, prosecution, etc)









rules H2/170





# Quality for pedestrians Proportion of pedestrians excluded — "Pedestrian friendly" — compromise design — "Standard" — flow focused design—

Drivers are LIKELY to obey Highway Code rules H2/170

Drivers are UNLIKELY to obey Highway Code rules H2/170 Drivers are UNABLE to obey Highway Code rules H2/170



Drivers are UNABLE to

obey Highway Code

rules H2/170



# Quality for pedestrians Proportion of pedestrians excluded - "Pedestrian friendly" -----i compromise design ----- "Standard" ------ flow focused design----Drivers are UNLIKELY

to obey Highway Code

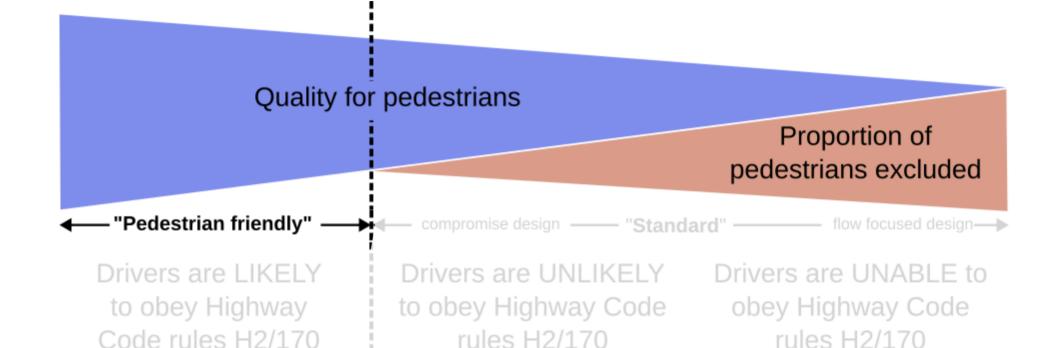
rules H2/170

Drivers are LIKELY

to obey Highway

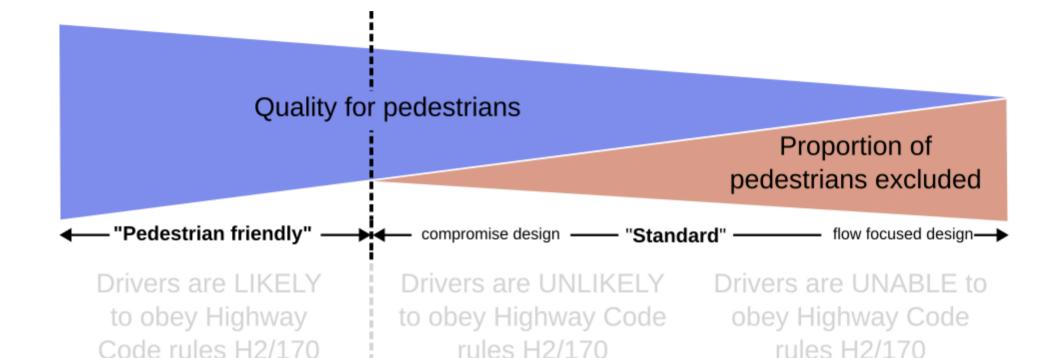






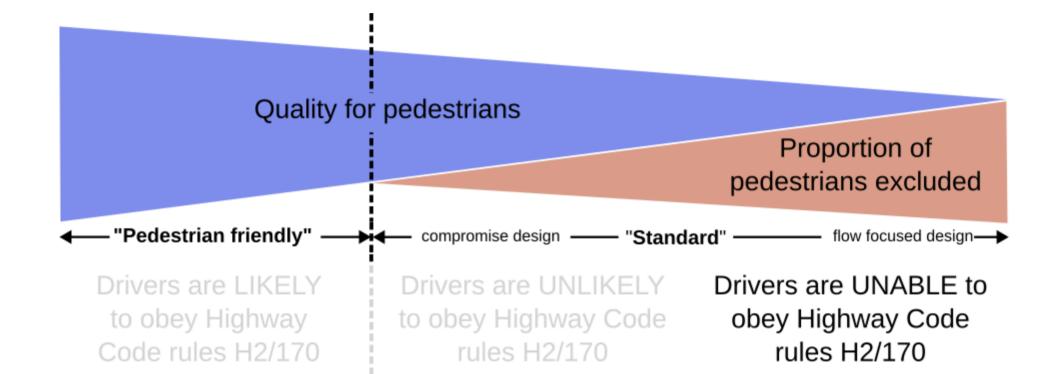






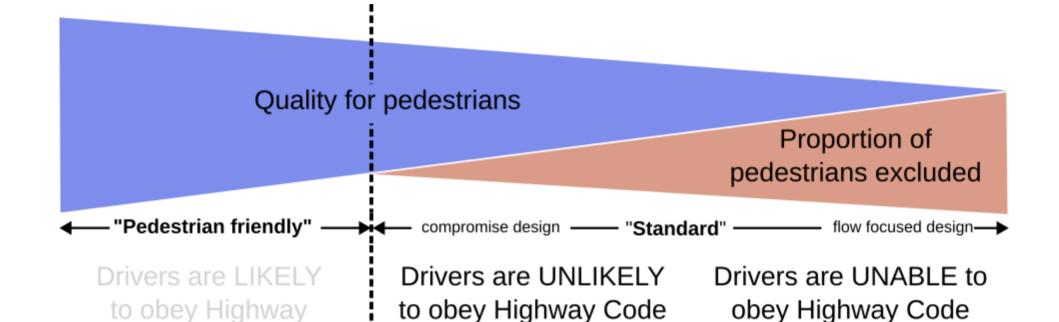








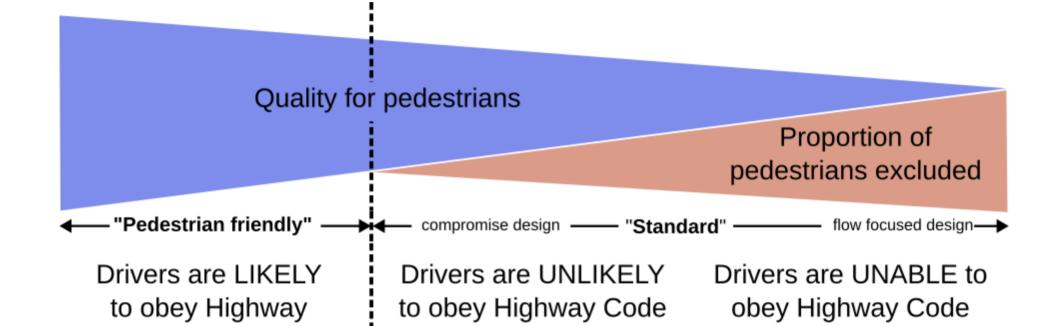




rules H2/170







rules H2/170

# Bringing some ideas together





Junctions can (must) be designed to this standard

This can't be done without network-level work

There are benefits around standardisation





# What features increase/decrease pedestrian friendliness?

# Factors that affect pedestrian friendliness





**Background vehicle speed** 

Through traffic volume

**Turning speed** 

**Turning vehicle size** 

Turning levels and complexity of traffic movement

Visibility character and crossing distance

Presence/absence of physical barriers to pedestrian movement

# Features that affect pedestrian friendliness





Kerb height

**Dropped kerb presence** 

**Dropped kerb gradient** 

Dropped kerb gradient direction

**Tactile paving presence** 

Tactile paving design

Space at top of dropped kerb

Physical prevention of parking

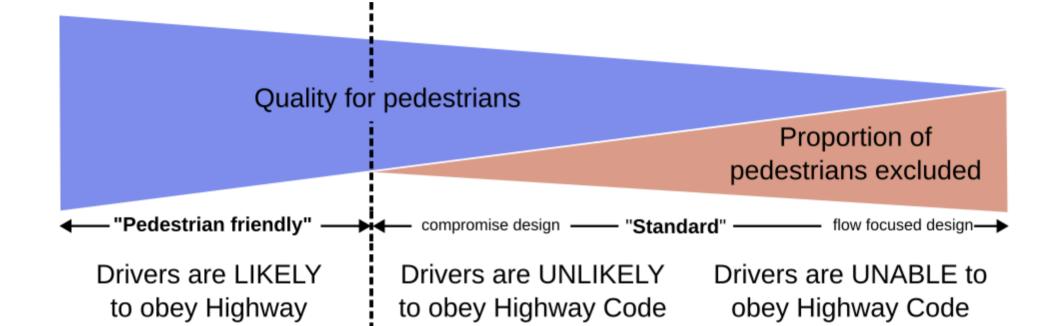
Whether roads one/two-way

Prohibition/allowing different turns

**Constraints on carriageway space** 



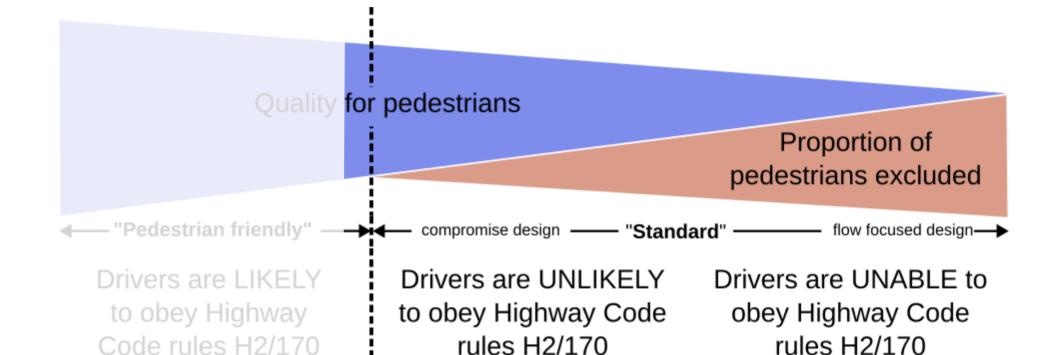




rules H2/170



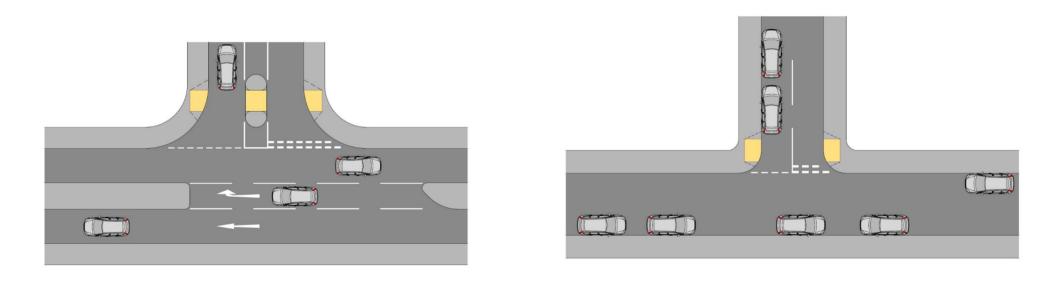


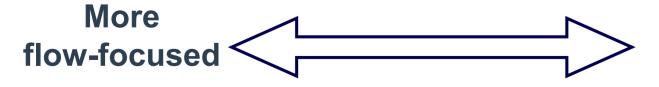


## Standard priority junctions (spectrum)





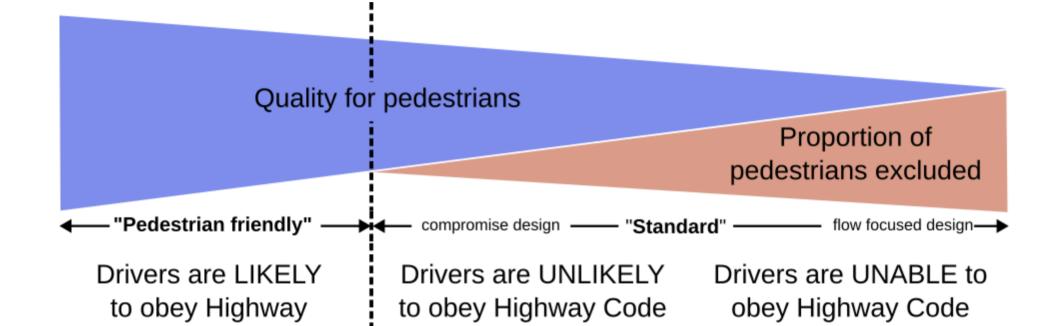




More pedestrian-friendly







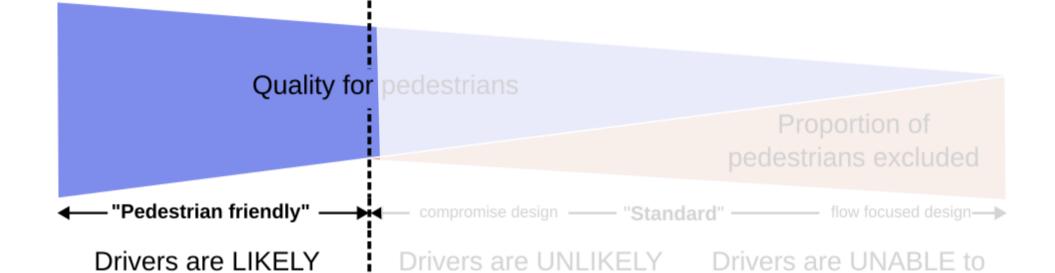
rules H2/170



obey Highway Code

rules H2/170





to obey Highway Code

rules H2/170

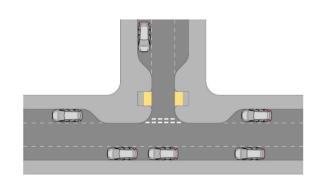
to obey Highway

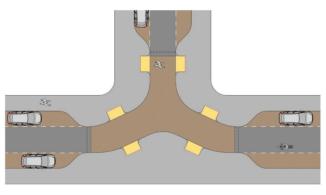
# Pedestrian-friendly junctions (arrangements)

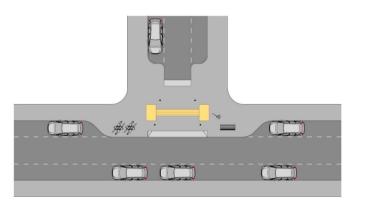




(NOT INHERENTLY pedestrian-friendly... ...you have to look at the network)



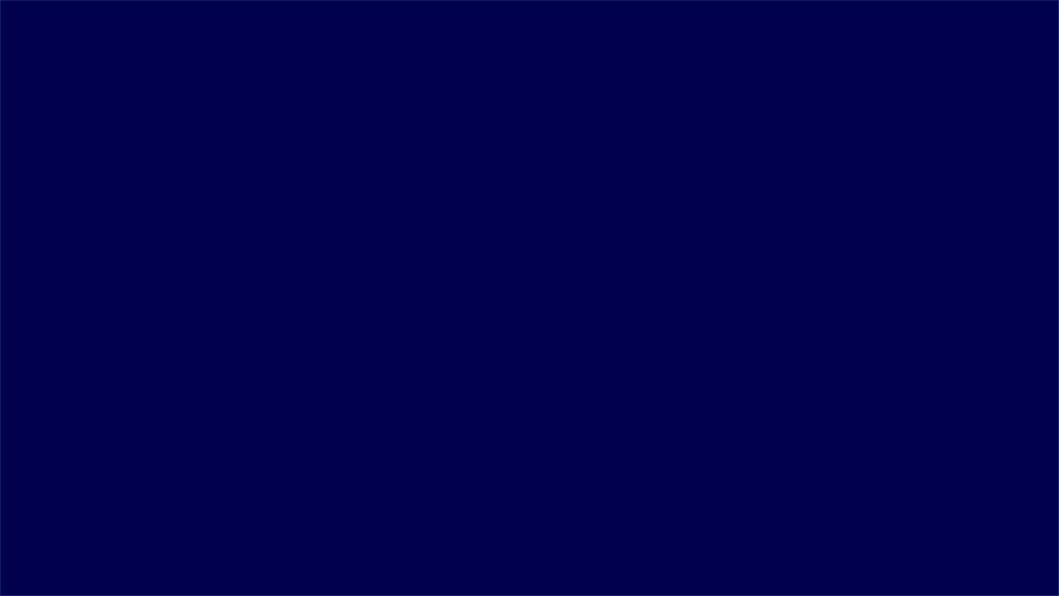




Pedestrian-friendly marked priority

No-priority junction

Continuous footway





www.robertweetman.net

www.urbanmovement.co.uk