



# Reviewing speed limits: the case for multi-criteria analysis

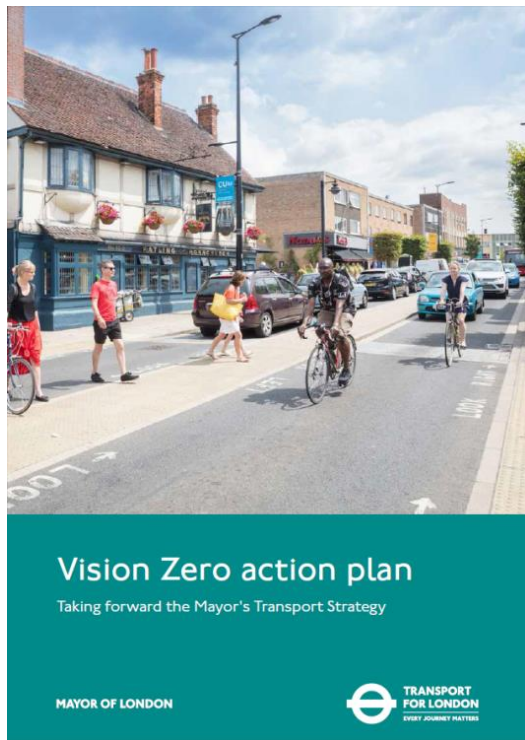
POLIS-ITF Workshop - 20 November 2018

Jonathan Turner



EVERY JOURNEY MATTERS

# Vision Zero action plan officially launched on Tuesday 24<sup>th</sup> July 2018



'Our bold and far-reaching plans...start from the basis that no death or serious injury on London's roads should be treated as acceptable or inevitable'

'At the heart of our plans is reducing the dangers of speeding vehicles across London'

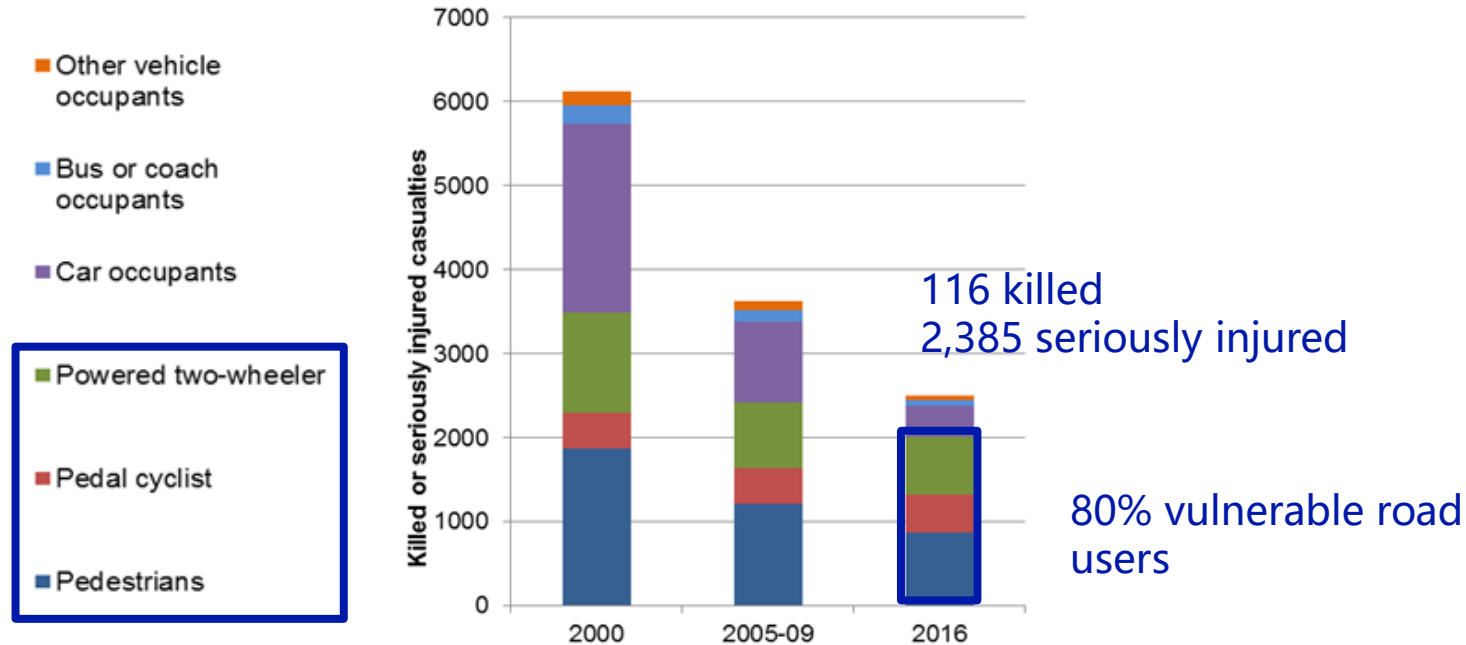
<http://content.tfl.gov.uk/vision-zero-action-plan.pdf>



Substantial casualty reductions have been achieved,  
especially for serious injuries to car occupants

Considerable challenges remain.

In 2016 alone over 30,000 people were injured on London's roads.



# A safe systems approach to tackling road danger

## Safe speeds

appropriate to the street



## Safe streets

more forgiving of mistakes



## Safe vehicles

reducing the risk of the most dangerous



## Safe behaviour

of people using our roads



## Post collision learning and criminal justice

and care for collision victims



# Lowering speeds on the TfL road network



# TfL directly manages 580km of London's busiest roads

<5% of London's 15,000km of road network

Flows average ~50,000 vehicles a day

Accounts for almost one third of traffic kms

## Key

Current speed limits on TLRN

20mph



30mph



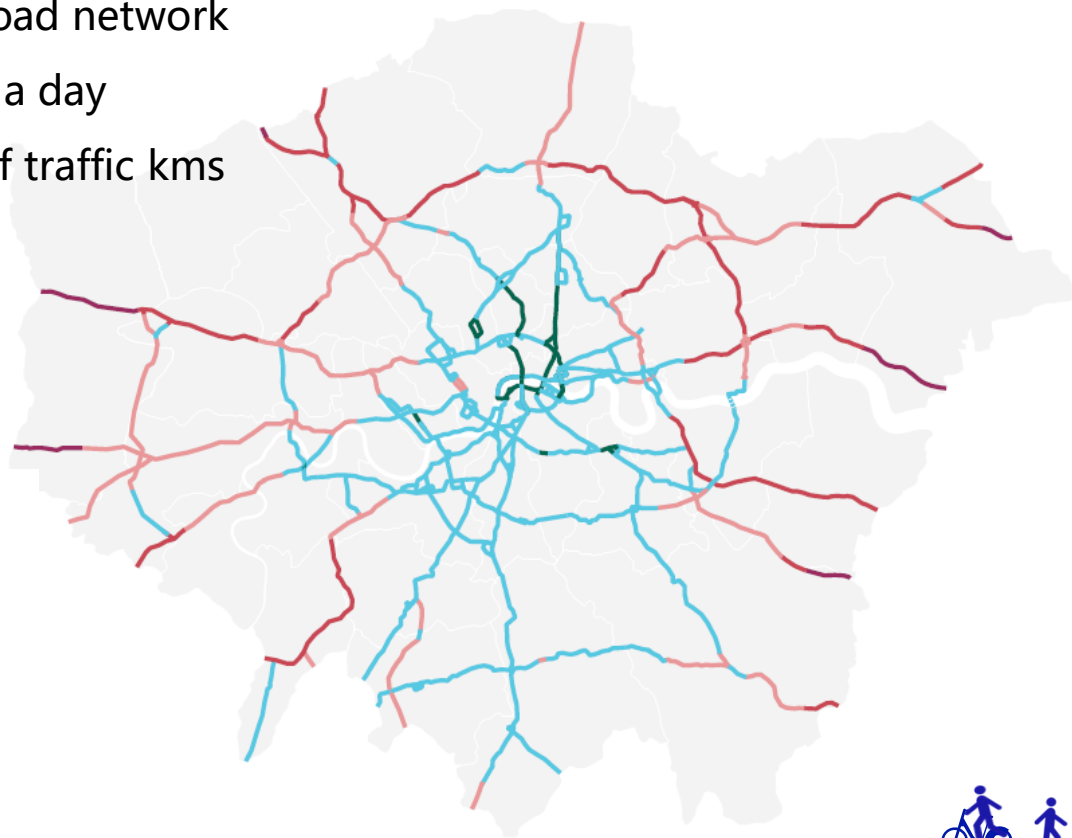
40mph



50mph



70mph



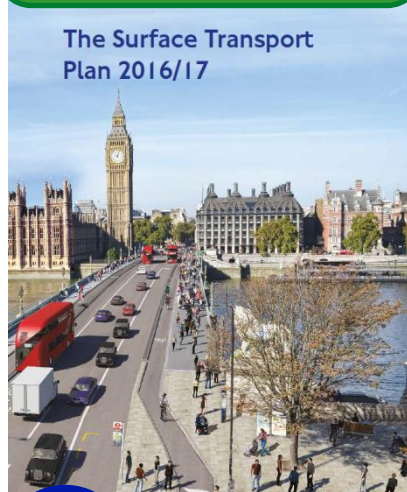
EVERY JOURNEY MATTERS



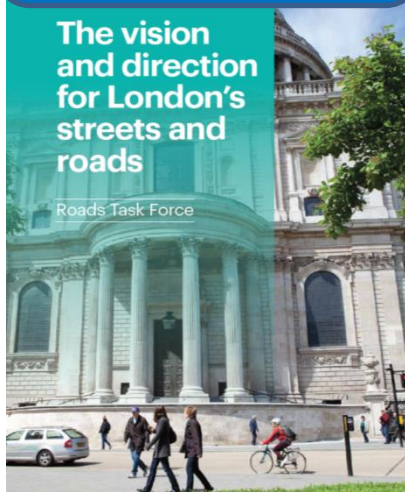
# A risk based approach for delivering lowering speed limits on TfL's roads

- Make 20 mph the default speed limit for the TLRN within central London
- Identify other appropriate high risk locations across London by considering:

Road danger  
(Current performance)



Walking & cycling vs  
motorised people  
movement  
(Aspirational utilisation)



Network coherence &  
future network plans  
(Constraints)



Mapped to ~1km  
GIS buffers  
(Meaningful framework)



# Identifying road danger is the starting point and focus of the analysis

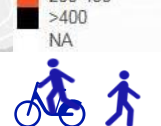
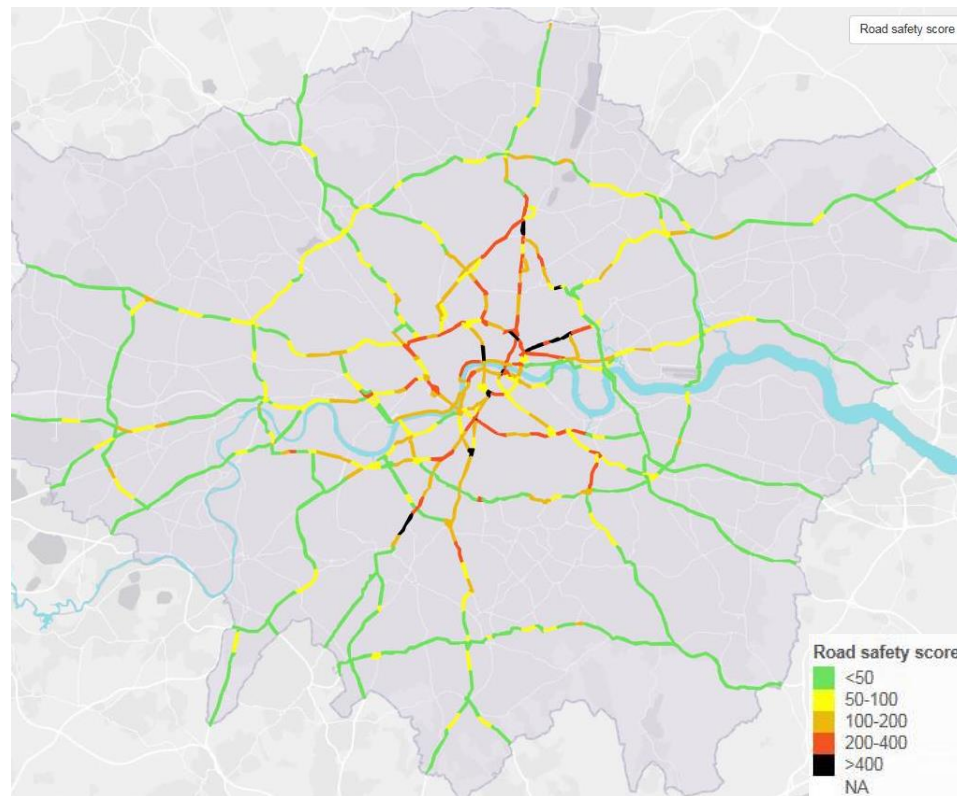
- The ODT has priority scores for:



- These scores account for:

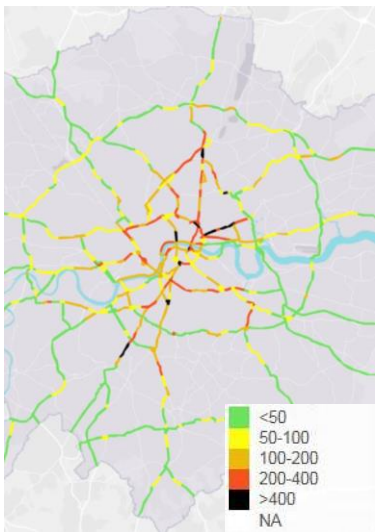
1. KSI risk per km walked / cycled / travelled  
*(based on all casualty data)*
2. Exposure  
*(which determines total numbers)*
3. Likely scope for collision reduction  
*(by comparing to similar streets)*

- Scores summed and normalised.  
Amber, red, black are above average

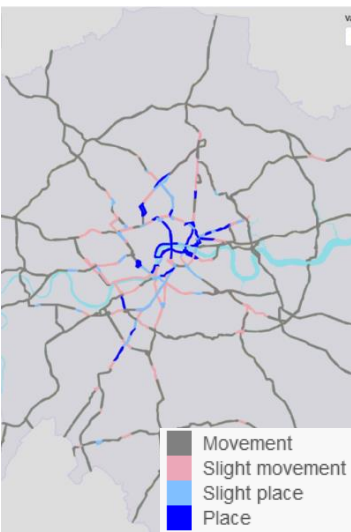




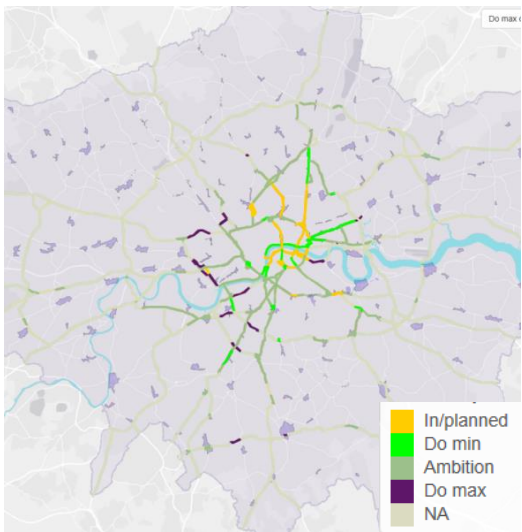
# Three levels of ambition proposed, based on...



Road Danger



Aspirational future mode use



Initial priority options

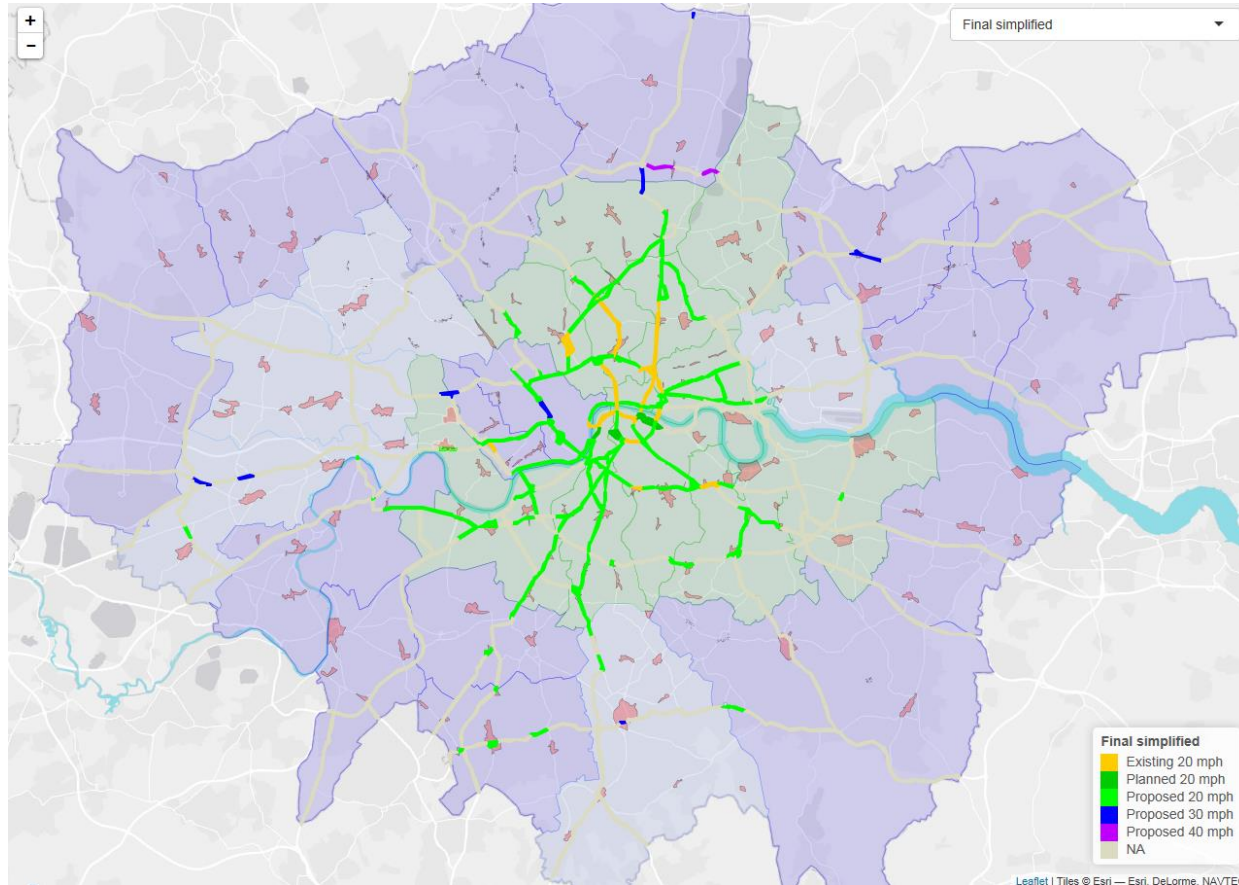
Do Minimum	>3 x average
Ambition	1-2x average
Do maximum	n/a

High place
Slight place
Slight movement

28km	(All central and mostly A10 & 11)
120km	(Including some gaps & town centres with clear needs)
16km	



Final proposal consists of the ambition option plus three town centres from the 'do max' option - 150 km of TLRN



Proposals available on internal GIS portal, Playbook, to aid in delivery

# Complementary measures will be taken to encourage safe speeds

Safe streets

Safe speeds

Safe vehicles

Post collision learning  
and criminal justice

Safe behaviour

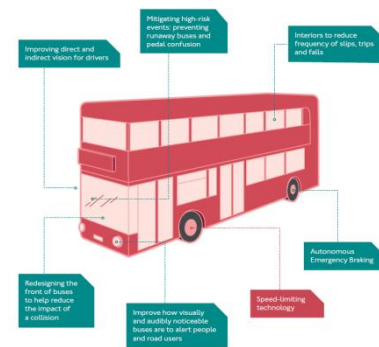
Earlier 20 mph implementations have shown engineering and changing the environment are necessary where current speeds are above those required for self-enforcement

Appropriate signal timing offsets

Speed limiting technology on buses

Collaborating with the police on enforcement including with existing speed cameras

Along with a supporting programme of communication and engagement



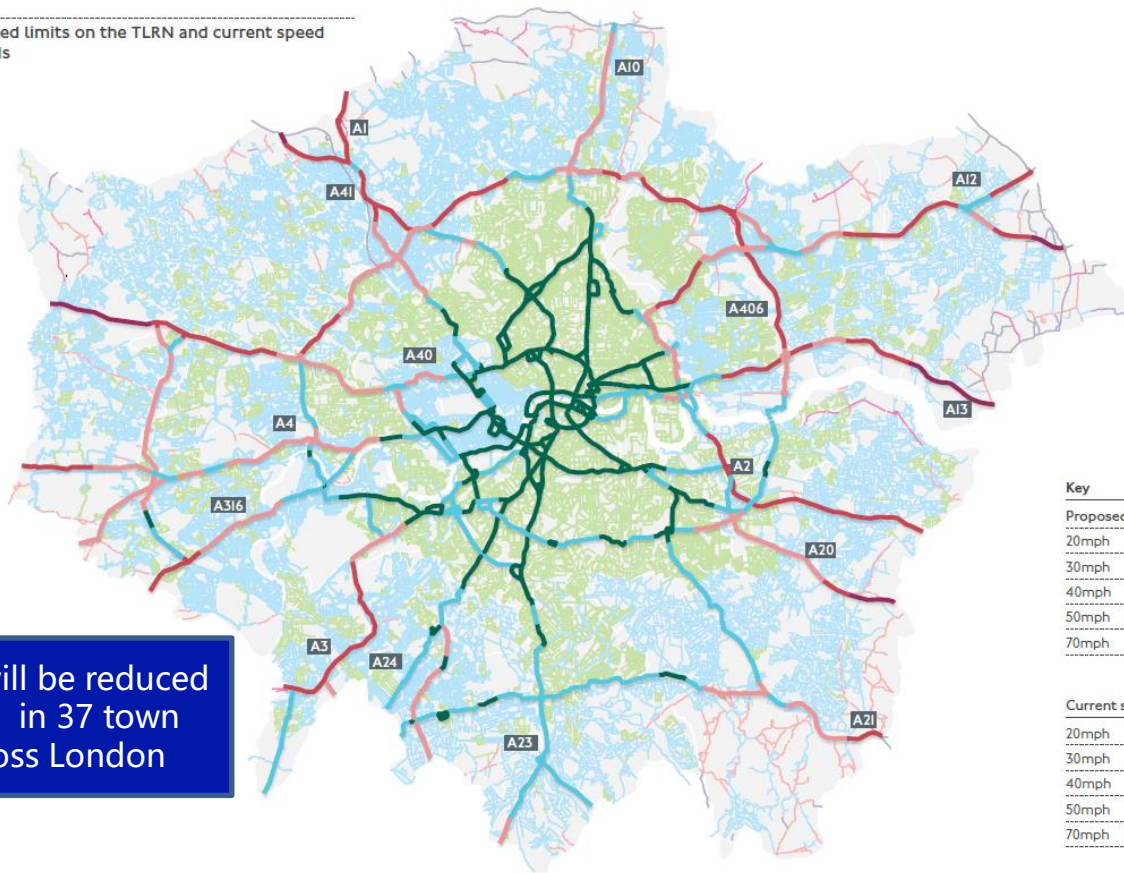
# The benefits and costs of implementing the proposals

- The new limits are expected to result in several thousand fewer casualties (all severities) and several hundred fewer deaths and serious injuries by 2030\*
- An important contribution, but no panacea, hence a whole system approach
- Costs will depend very much on the final level of engineering but expected to be in the tens of millions of pounds
- Other benefits / disbenefits hard to quantify from data available
  - Expect largest benefits from mode-shift
  - Speed impacts potentially high, but will be partially mitigated by junction queuing effects and in the longer term mode shift
- All road users will experience well integrated low speed environments with higher levels of safety, encouraging more active, healthier travel

\*based on estimated lower future casualty rates, speed changes and power

# Thank you!

Figure II: Proposed speed limits on the TLRN and current speed limits on borough roads



31 per cent of the TLRN will be 20mph

TLRN roads in the Congestion Charge Zone will all become 20mph

Network coherence to reflect borough speed limits and connecting sections on the TLRN

Speed limits will be reduced on the TLRN in 37 town centres across London

Key

Proposed speed limits on TLRN roads	
20mph	Dark Green
30mph	Light Green
40mph	Red
50mph	Pink
70mph	Dark Red

Current speed limits on borough roads	
20mph	Light Green
30mph	Light Blue
40mph	Light Red
50mph	Pink
70mph	Grey

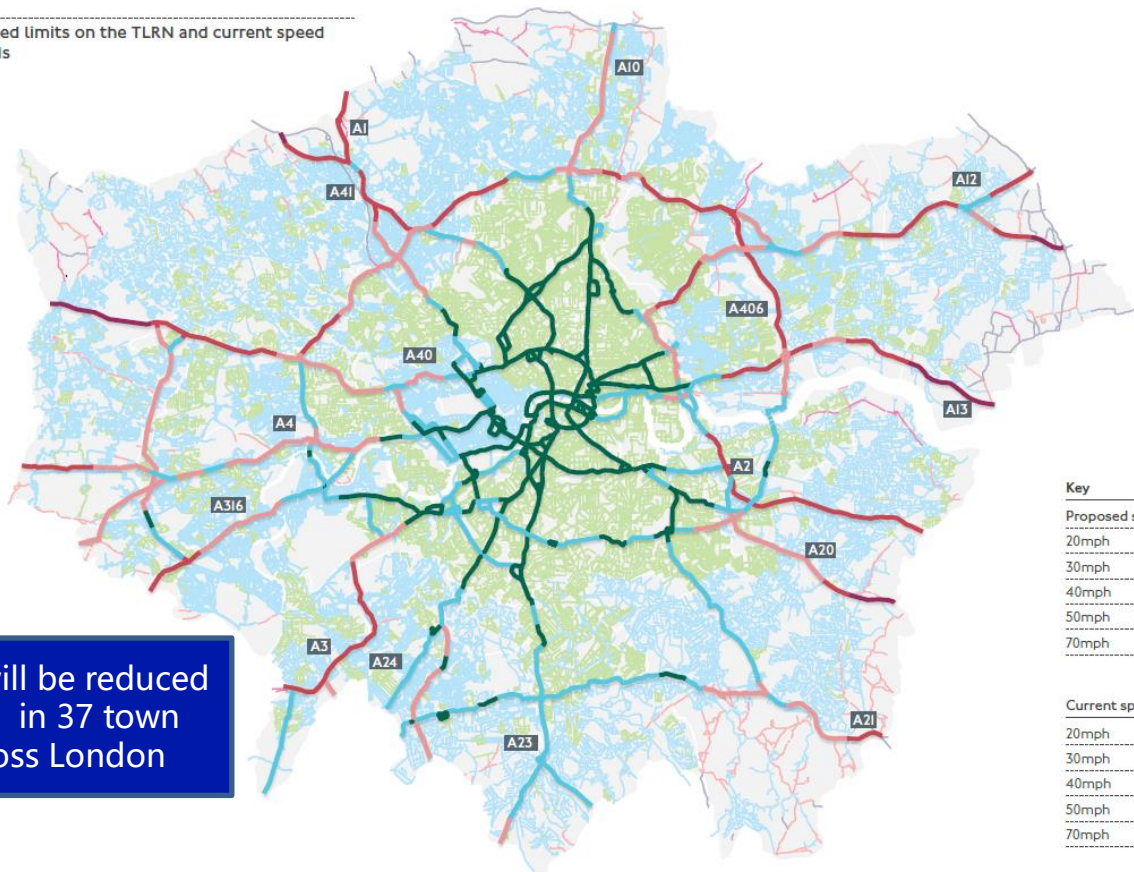


EVERY JOURNEY MATTERS



# Any questions?

Figure II: Proposed speed limits on the TLRN and current speed limits on borough roads



31 per cent of the TLRN will be 20mph

TLRN roads in the Congestion Charge Zone will all become 20mph

Network coherence to reflect borough speed limits and connecting sections on the TLRN

Speed limits will be reduced on the TLRN in 37 town centres across London

Key

Proposed speed limits on TLRN roads	
20mph	Dark Green
30mph	Light Green
40mph	Red
50mph	Pink
70mph	Grey

Current speed limits on borough roads	
20mph	Light Green
30mph	Light Blue
40mph	Light Red
50mph	Pink
70mph	Grey

