A new agenda for sustainable travel

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Introduction

- Professor at the University of Hertfordshire Smart Mobility Unit
- Transport policy consultant
- Previously CEO, Campaign for Better Transport
- Resident in St Albans for over 30 years

Transport outside cities

Transport research & policy focuses on cities but rural and peri-urban areas outside cities need attention

Counties like Hertfordshire feature:

- prosperous, high car ownership and severe traffic congestion
- no large cities but several smaller towns
- edge of city regions
- poor public transport - especially orbital
- substantial planned housebuilding

SMU ran several roundtables in 2020 and 2022 to develop a research and policy agenda for these places, and we are now running more with Transport East as a Rural Transport Learning Network

Smart Mobility Unit (SMU)

- Teaching, including new MSc in transport planning, and data unit

- Research (developing local, national & international partners/collaboration)

- Professional Aspects (University Travel Plan/Uno – UH's bus company)

- Consultancy (EU Work/ Quality Partnerships / Social Enterprise (CIC))

- Seminars/Workshops – Sharing & disseminating best practice

- Multi-disciplinary: SMU includes specialists in data, behavioural psychology, engineering and business

Increasingly SMU is part of other university teams, including Centre for Climate Change Research (C3R) and Centre for Future Societies

University of Hertfordshire **UH**

The future of transport outside cities: a report on roundtables held by the University of Hertfordshire Smart Mobility Unit

Getting about in the Abbey line area can be really annoying...

- There are a lot of traffic jams!

- The buses are confusing and it's difficult to know where they run from and to, plus they cost a lot and mostly disappear after 7pm

- The Abbey line is very quick (and the CRP does great work in promoting it) but it is infrequent and recently unreliable

- Cycling feels dangerous because there aren't protected routes

- A lot of people walk but the main roads are sometimes difficult to cross and pavements aren't maintained properly

- Some new housing developments are quite car based

All of this makes the district feel quite car dependent...

Car dependency isn't just annoying, it creates wider problems…

▶ Air pollution from vehicles: research shows impacts are wider and worse than previously thought

▶ Health impacts from less physical activity

▶ Road traffic dominates streets and landscapes

▶ Road casualties

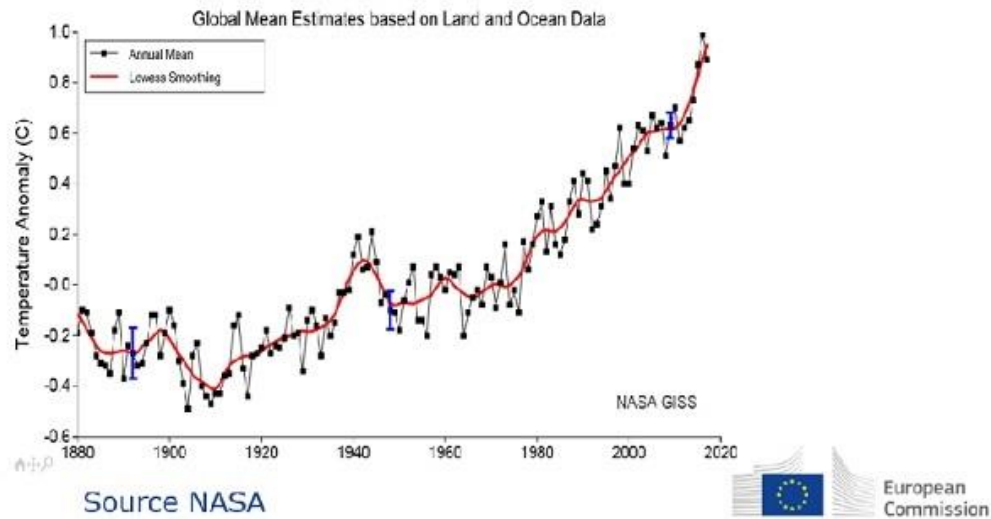▶ Social exclusion: those without cars are locked out of society, with loneliness and isolation on the rise

And above all there is climate change…

a.bacall

"You want me to stop playing video games and go outside to play? In all that air pollution?"
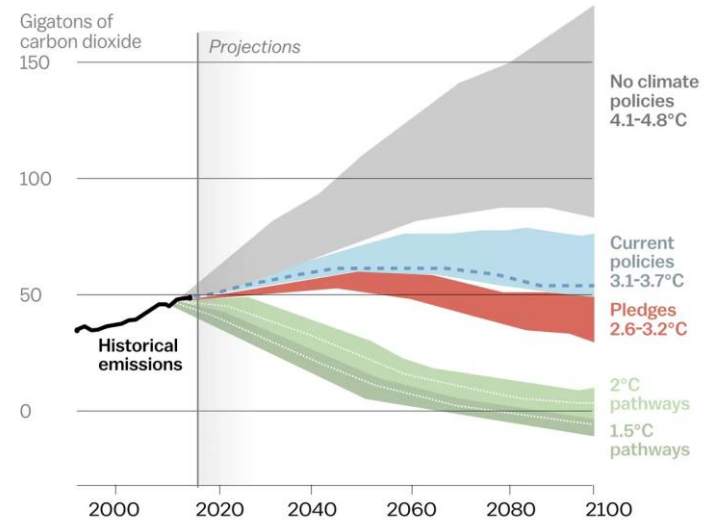
Climate change adds urgency to this...

Temperature has increased by about 1°C compared to pre-industrial period.

Global Mean Estimates based on Land and Ocean Data

Source NASA

European Commission

Effect of current pledges and policies

Global greenhouse gas emissions

Gigatons of carbon dioxide

No climate policies 4.1-4.8°C

Current policies 3.1-3.7°C

Pledges 2.6-3.2°C

2°C pathways

1.5°C pathways

Historical emissions

Projections

Source: Climate Action Tracker

Vox

Transport is in the firing line: it has now overtaken energy as the largest emitting sector in the UK

UK CO2 emissions 2012-2017

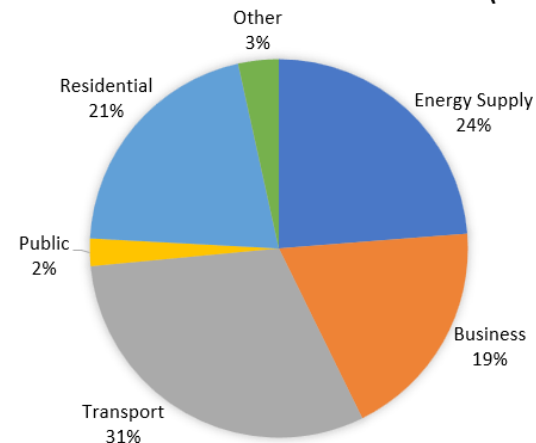| From power generation	From waste	From farming	From transport
▼ -55%	▼ -23%	▼ -3%	▲ +4%

Source: Climate Change Committee

BBC

oneHome
Positive Solutions

UK CARBON DIOXIDE EMISSIONS BY SECTOR (2021)

- Other 3%
- Energy Supply 24%
- Residential 21%
- Public 2%
- Business 19%
- Transport 31%

Source: Department for Business, Energy and Industrial Strategy (2022), *2021 UK greenhouse gas emissions: provisional figures*

We do have data on transport patterns and their impacts in Hertfordshire:

- Travel patterns: in 2022 42% of trips in Hertfordshire were made by car drivers, 19% by car passengers, 26.5% on foot, public transport 9% https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-planning/transport-and-accident-data/ttdr/traffic-and-transport-data-report-2023.pdf

- Air pollution: https://addresspollution.org/ will give a free air quality report for your address – e.g. Harpenden High Street exceeds 2 World Health Organisation limits and is in the 68th percentile

- Road casualties in 2019 in Hertfordshire went down but serious casualties went up https://www.hertfordshire.gov.uk/media-library/documents/highways/transport-and-accident-data/hertfordshire-road-casualty-facts-2020.docx-1.pdf

- Carbon emissions: the district's transport carbon emissions are higher than the national average and in some areas are very high https://www.carbon.place/ (place-based carbon calculator)

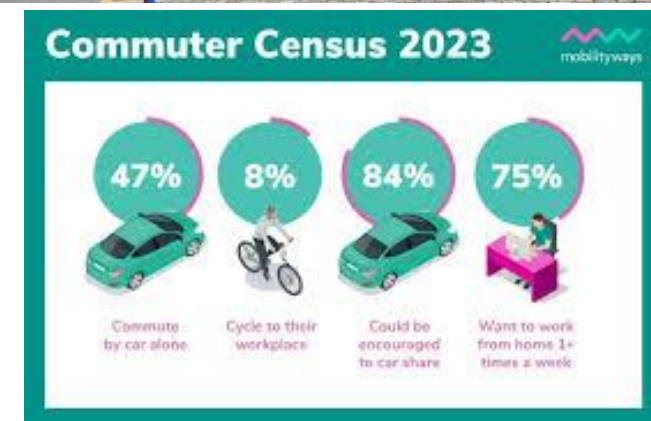- Commuting carbon emissions in St Albans are at about the national average (615 average commuting emission levels), with 22% zero carbon commuters https://www.mobilityways.com/map/

In summary:

- Travel around Hertfordshire is dominated by car travel, though there is a lot of walking too.

- This leads to a lot of congestion – there isn't enough space for all the traffic, and satnavs etc push traffic into side roads

- Travel patterns have changed since Covid – less commuting, more working and shopping from home, more leisure travel

- These travel patterns are unsustainable – there isn't space for more cars and vans in many streets and they produce carbon emissions and air pollution too.

St Peter's Street St Albans 1959
Marion Gourd's Book - St Albans Nostalgia Raff © 2015

The good news is that there are options for tackling these challenges and impacts

- It is possible to have good public transport, even outside cities

- Active travel – walking, wheeling and cycling – can be a real option for travel outside cities

- New technology can bring new travel options

- New housing does not have to be car-based

Commuter Census 2023

47% — Commute by car alone
8% — Cycle to their workplace
84% — Could be encouraged to car share
75% — Want to work from home 1+ times a week

Principles for better transport

- Improving public transport – making trains and buses better, cheaper, more accessible and linked together
- Improving active travel so that walking and cycling are real options for shorter journeys and better linked to public transport (including better and less cluttered pavements)
- Working with travel generators – employers, schools, leisure providers, developers – to improve alternatives to car use
- More travel options – car clubs, car sharing, bike hire
- Less car-based development
- More powers and funding for local transport

So what might that mean for a better Abbey line?

The Abbey line CRP has done some really good things in marketing the line and improving facilities on it, but the line should be enhanced:

▶ More frequent services: a passing loop at Bricket Wood would allow at least a half hour service

▶ Cornwall branch lines are seeing this – the Falmouth branch had a passing loop installed in 2009 which allows for a half hourly service

▶ The Newquay branch is getting a passing loop now too, leading to an hourly service with through trains, and Newquay is also getting a second platform

▶ This is part of a wider programme driven by Cornwall Council (of which more later)
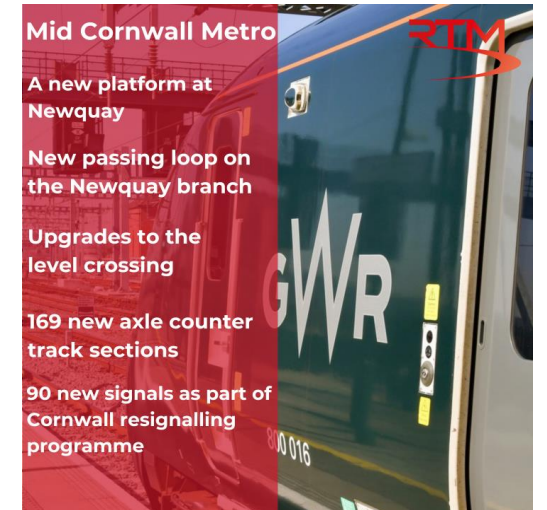
Mid Cornwall Metro

A new platform at Newquay

New passing loop on the Newquay branch

Upgrades to the level crossing

169 new axle counter track sections

90 new signals as part of Cornwall resignalling programme

A better Abbey line 2

- Greater accessibility – all trains on Greater Anglia network are accessible, including ramps to platforms

- Area wide ticketing for rail, bus and other transport

- Stations as hubs/gateways for surrounding communities, with good active travel links, cycle parking, bus links etc

Better public transport

Current public transport could be better in cost, availability and frequency. Options:

- Marketing what we have: we do have some good public transport but people don't know about it

- demand responsive transport, as already in North Herts and Dacorum (though didn't work in Watford)) -

- employer transport (Zeelo already runs services to Ocado)

- bus priority (not necessarily bus lanes)

-better walking and cycling links to the stations

And there are examples from elsewhere –like Sevenoaks (local town buses), Hereford (free buses at weekends) and Cornwall

Hertfordshire Enhanced Bus Partnership

- Prioritising bus services in traffic, including roadwork impacts, bus priority and tackling bottlenecks

- Improving the image of bus travel, including minimum standards, marketing and branding

- Upgrading bus infrastructure, including coordinated investment on corridors and better interchange

- Closer integration of the bus network, including more multi-operator and contactless ticketing

- Smarter use of data and information, including real-time information

One Public Transport System for Cornwall

- ✓ An integrated transport system
- ✓ A single brand
- • Integration of timetables to facilitate seamless transfers
- ✓ Unified information platforms for users (RTPI, Wayfinder app, Ticket purchasing app)
- • Integration of payment systems
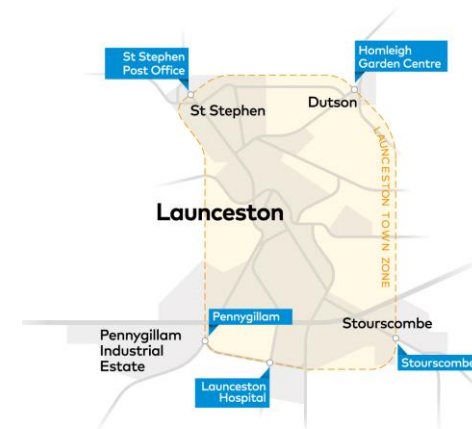- • Integration of fare systems and cuts in fares

https://www.transportforcornwall.co.uk/

Current modes being worked on:
- ✓ Bus
- ✓ Rail

In future phases:
- • P+R
- • Ferries
- • Micro-mobility modes

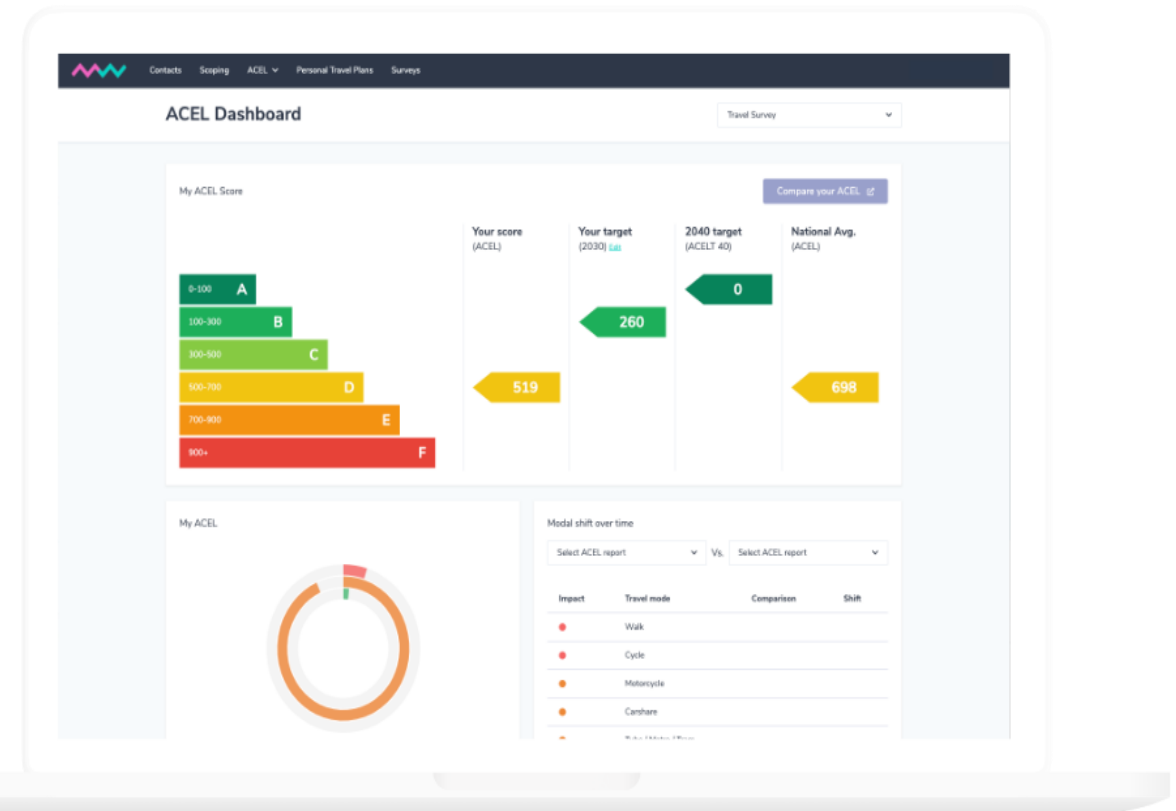# Tackle journeys to work: a "commuter zero" initiative

Work with employers to move to net zero commuting - options include

- Car sharing

- Bespoke bus services

- Adjust existing buses (rerouting, discounts)

- Rewards for sustainable travel

- Pool bikes

Start with measuring employee travel and setting targets.

Some of this is already happening in Hertfordshire -see
https://www.mobilityways.com/
https://www.smartgo.co.uk/stevenage;
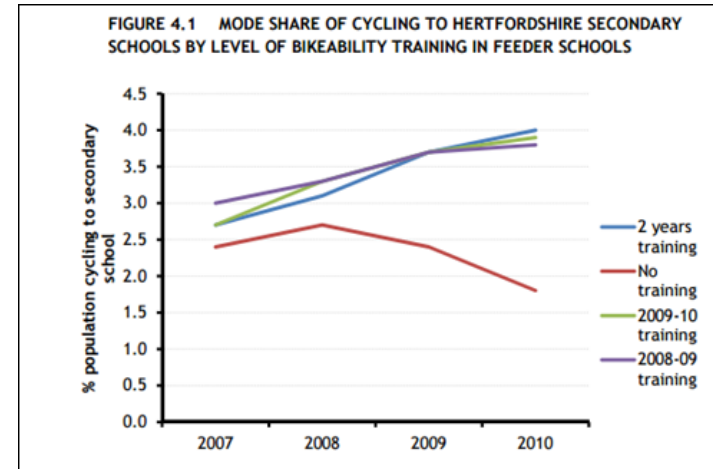https://liftshare.com/uk/community/Hertfordshire

Car clubs and car sharing

▶ Car clubs give access a car or van when you need one, so they are an alternative to second and extra cars

▶ There are now ones in Watford and St Albans https://www.enterprisecarclub.co.uk/gb/en/programs/regions/south-east-england/st-albans.html

▶ There's also a growth in peer-to-peer car sharing, https://www.hiyacar.co.uk/

Short distance car trips

- A lot of car journeys in Hertfordshire are short –35% of car driver trips and 41% of car passenger trips were under 3 miles

- In principle, walking and cycling could replace some of these

- For journeys to schools, walking buses were pioneered in Hertfordshire and could be revived, and bikeability training can encourage cycling and there is now the "school streets initiative", http://schoolstreets.org.uk/

- There is cycle parking at some railway stations which has been well used

However, there is a need to give priority for pedestrians and cyclists along and across main roads

FIGURE 4.1 MODE SHARE OF CYCLING TO HERTFORDSHIRE SECONDARY SCHOOLS BY LEVEL OF BIKEABILITY TRAINING IN FEEDER SCHOOLS

Bike hire, including e-bikes

▶ Watford and Borehamwood already have bike hire schemes - https://beryl.cc/bikeshare/watford

▶ The Watford scheme has 300 bikes and 72 bays

▶ These include e-bikes, which can be a game changer – they can make cycling easier and more attractive for many more people https://www.creds.ac.uk/e-bikes-could-slash-transport-emissions-and-get-britons-back-to-work/

▶ There are local e-bike stockists like http://theelectricbikevolt.co.uk/

▶ E-cargo bikes can be used for deliveries even in quite small and hilly places, see https://www.cargodale.co.uk/

Linking land use and transport

Where new homes are built and the layout and design will have an impact on future travel patterns and carbon emissions

- Transport for New Homes has reviewed transport impacts of new homes

- field-based project reviewing a variety of new housing developments in different places in the UK

- Comparisons with Netherlands and Sweden

- Further report on garden towns and villages

- Revisit of the 2018 housing sites

From this work, various themes emerged

Car-based living: what to avoid

- Traffic created by building housing in the wrong place: "cowpat developments"

- In most of the places visited, people relied on their cars for the great majority of journeys.

- Parking and road access took up so much room it had a severe impact on the public realm

- Few urban trees and gardens – little space left

- Destinations were often car-based too: car park to car park

Other emerging themes

- Homes without connections for pedestrians, cyclists and buses – "red line" issues

- Public transport opportunities missed

- Importance of mixed land use with local services and facilities – Poundbury

- Urban quarters rather than isolated developments

- Lovely masterplans but reality is new roads and car parking

But better practice does exist

- Kidbrooke: limited parking, places to walk to

- Poundbury: 32% of residents walk to work, local facilities

- Shawfair: built around station on Borders rail

- Derwenthorpe, York: local facilities and good walking routes

- New Lubbesthorpe: buses from day 1

Transport for New Homes checklist
https://www.transportfornewhomes.org.uk/the-project/checklist-for-new-housing-developments/

Implications for new housing in Hertfordshire

- 100,000 car-based homes will make congestion and pollution a lot worse

- High quality public transport must be at centre of development, not an afterthought

- Design of developments and of surrounding roads should prioritise walking and cycling

- Density of development and levels/ design of car parking will be important

- There should be local services and facilities that people can walk or cycle to

New housing estate

Managing traffic and roadspace

- If alternatives to single-occupancy car use are to be encouraged, they have to be given priority on the roads

- Pedestrian priority: there needs to be a linked up walking network, with signage, traffic lights and better crossings

- Cycle network: a proper network of cycle routes and cycle parking will involve taking some roadspace away from cars!

- Parking: some on-street parking may have to go, if pedestrians, cyclists, buses, e-scooters etc are to be given priority (the needs of disabled drivers must be considered here). This might be linked to car clubs.

- Low traffic neighbourhoods – the Waltham Forrest mini-Holland in London has seen 32 minutes extra walking and 9 minutes extra cycling a week compared with other boroughs, and 51,000 households no longer suffer illegal air pollution

Finance and funding: the workplace parking levy

▶ Nottingham's workplace parking levy:

▶ Paid by employers with 10+ spaces

▶ £300 per space per year

▶ Raises around £9m a year for transport, including trams and electric buses and the main rail station

▶ 40% of trips in Nottingham are now by public transport, highest levels outside London

Bringing it all together

- Mobility hubs – bringing transport together with bike hire, car clubs, e-scooter hire and public transport https://como.org.uk/shared-mobility/mobility-hubs

- Delivery hubs with cargo bikes for first/last mile

- Total transport- integrating other transport services (health, social services etc)

- Joint ticketing and information – "mobility as a service, even in the Highlands - https://gohi.app/
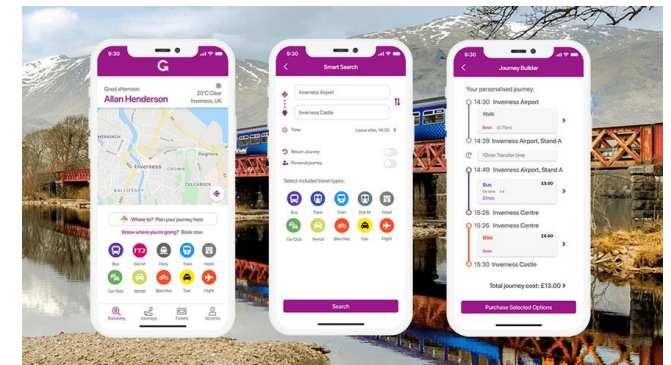
But will anything change? Can transport policy and behaviour move?

Travel behaviour can change

Local Sustainable Transport Fund 2011-15 outcomes:

- Car use fell relative to other areas
- Adult cycling increased by 6.6% relative to other areas
- 4.1% reduction in car commuting
- Per capita carbon emissions fell by 6.9%
- Projects were very high value for money

Cycling Cities and Towns Projects saw 24-29% average increase in cycling over 5 years

And good consultation and public involvement can create consensus and bring people together

Moving away from car dependence is a real challenge

The Abbey line area could move towards:

- Less car-based development
- Better public transport
- Making cycling a real option
- Making walking safe and pleasant
- Shared cars not single occupancy
- Using new technology to make transport work

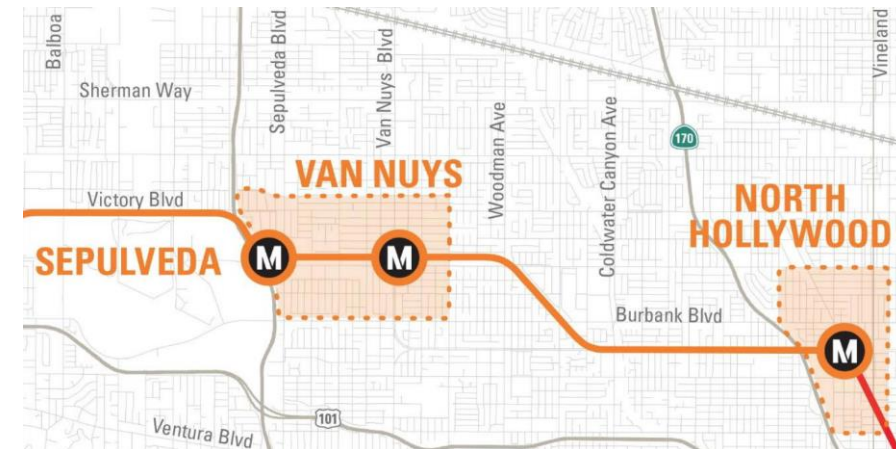Transport in South Hertfordshire can be better and greener!

CLIMATE SUMMIT

WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?

- ENERGY INDEPENDENCE
- PRESERVE RAINFORESTS
- SUSTAINABILITY
- GREEN JOBS
- LIVABLE CITIES
- RENEWABLES
- CLEAN WATER, AIR
- HEALTHY CHILDREN
- ETC. ETC.

Smart growth not dumb growth…

There's increasing understanding that economic growth doesn't mean more and more roads and cars:

- Vienna: car use has fallen from 40% - 36%, 30% of journeys are now on foot or bike, 34% public transport

- Los Angeles: 90% car, 10% rest (and even they are changing)

- London: 1993- car 46% public transport 30%; 2016- car 32% public transport 45%

Contacts

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https://www.herts.ac.uk/research/groups-and-units/smart-mobility-research-unit