

**Climate Emergency Policy and Scrutiny
Committee**

20 July 2022

Report of the Director of Environment, Transport and Planning

Model Shift in Transport

Summary

1. Scrutiny Committee have requested a report on how to consider modal shift in transport.
2. Modal shift in simple terms is moving transport users from the car to other more sustainable means for example from the car to the bus.
3. York's current Local Transport Plan sets a hierarchy of modes with walking as the preferred mode with car travel at the bottom.
4. However, it is a naive approach to consider that it is about turning car drivers into cyclists. The vast majority of people are to some extent multi modal. The art is removing barriers, adding incentives so that more modes are available for each journey, it is about increasing choice and potentially about disincentivising other modes.

Background

5. Achieving mode shift requires many things to influence travel choice and behaviours.
6. It is important to understand the context of where you start. York has a 40 year history of investment in sustainable transport modes which has resulted in achieving high use of these modes. Whilst there is variation in the short term trends, over the longer term trends are positive (either in absolute terms (bus up 65% since 2000), or relative terms (compared to the change in other cities). The national context is one of falling trips.

National Travel Trends

7. The following are key trends from National Travel Surveys and the Commuting in England report 1988 – 2015.
8. Commuting trips measured as commuting per person per worker and in absolute terms have declined between 1988-2015.
9. Between 1995/7 and 2013/14, England's population grew 12% while the total number of annual commuting journeys decreased from 8.5 billion to 7.9 billion.
10. The average number of annual trips taken by people in England in 2019 is comparable to number of trips in 1972/73 (NTS 2019); Most of the decrease in average trips since 2002 is due to a 13% reduction in the number of car trips taken by car drivers (NTS 2019)
11. We do not know if increased home working in response to Covid epidemic will continue into the future.
12. In York First have undertaken surveys at the Park & Ride sites as to why did people decide to use that method of transport, rather than another option:

	<u>2018</u>	<u>2022</u>
Habit / usually use the car	29%	9%
Easier / more convenient / flexible	27%	45%
Car more comfortable	15%	4%
More than one of us travelling together / pick up others	15%	3%
Don't know how / where to get the bus/coach/P&R	14%	3%
No other option	10%	2%
Car is cheaper	8%	4%
I have a (free) parking space	7%	2%
Faster	7%	16%
Don't like buses	7%	3%
No convenient bus route / have to drive out to P&R site	4%	3%
Staying late in the city centre / I can drink	3%	4%
Other (one-offs)	2%	4%

York Population Change

13. York's population increased by 38,000 people (22%) from 1991 to 2019. This population growth has not resulted in directly proportional increase in car traffic.

Traffic Trends in York

14. Based on Traffic Flow data within the City Centre pre-Covid Traffic flows have declined across City Centre Bridges

Location	AM peak	PM Peak	12 Hour
Skeldergate Bridge	24% decrease	36% decrease	26% decrease
Clifton Bridge	11% decrease	24% decrease	9% decrease
Lendal Bridge	27% decrease	13% decrease	21% decrease
Ouse Bridge	30% decrease	32% decrease	30% decrease

Behavioural Change

15. The foundation of behavioural science is the application of psychological insights into real world decision making to understand and affect behaviour. A behaviour is an action that is observable.
16. Behaviour science means understanding behaviour and developing effective interventions to influence it. Behaviour change activities includes policies, products, services and communications that are designed to make a difference to the way people act.
17. To reduce carbon in transport, will mean encouraging people to choose active travel options such as walking or cycling, or choosing public transport such as train or bus or electric vehicles instead of relying on fossil fuel transport modes. It can also mean choosing to travel less.
18. Achieving large scale behaviour change involves ‘cultural’ change amongst groups of people, involving simultaneously targeting behaviours with policy, infrastructure changes, communications and “nudges” that make it easier for people to do the right thing.
19. This is because 95% of the time our decisions are automatic and instinctive rather than rational or logical. To encourage behaviour change means understanding how and when people make decisions.

20. When looking at the current interventions and activities taking place across the City of York Council, they can be mapped to how collectively they are designed to influence behaviours.
21. Policy, infrastructure and communications are aligned to prompt modal shift – no one activity alone will achieve the desired outcome and instead, a blended approach that responds to COM-B will, over time, increase modal shift.

For example:

Capability	Motivation	Opportunity	Behaviour
Urban cycle skills Travel plans (itravel)	Active travel campaign	Active travel measures (2021-2023)	Make it easier to choose active travel
Travel plans (itravel)	First bus schedule and pricing	E-bus availability Tier / e-scooters trial	Make it easier to choose reduced carbon options
Health Trainers GP Environmental training (air pollution)	Kick the habit	Voluntary clean air zone	Prompt turning off the engine (anti-idling)

22. Nationally there is imperfect knowledge about existing options (people are more likely to use sustainable modes if they have accurate information for example about bus frequencies/ prices/ destinations, off-street cycle and walk routes etc). Can be addressed through leafletting houses, banners on street lamps and other advertising through to more resource intensive mechanisms like Personal Travel Plans feeding into targeted provision of things like cycle training and free try-out bus passes. Success rate – can be expensive (though is also very scaleable), but value for money evaluations have always suggested it is very good value for money (cheap compared to decongestion benefits achieved in comparison to infrastructure schemes like building additional highway capacity). Funding the resource intensive measures is a challenge as requires revenue funding which is uncertain without a new source (e.g. WPL/ RUC/ CIL)

23. There is the opportunity to use sticks as well as carrots to change travel patterns. Sticks actively encourage behaviour change using sometime blunt tools which affect some economic groups to a larger degree, these include:- higher parking charges, resident parking schemes, workplace parking levy, and the various forms of road user charging. Other measures include reallocation of highway space away from cars and into bus lanes and/or cycle lanes. The closure of through routes through modal filters. Restrictions to parking supply where the council is providing off street car parking. Also “moral sticks” ie publicising the adverse impacts of car use.
24. One of the challenges for York is what to do about the outer orbitals – A64 and A1237. They are increasingly congested, a decision to improve them would potentially induce more traffic, but it will also remove traffic from parts of the city where it is less desirable, and where it is probably suppressing trips by sustainable modes (e.g. outer villages, and where these highway congestion affecting bus journey times).

What CYC is already doing to target Climate Change: Current Projects and Plans

25. To enable residents, visitors, businesses to make real changes in behaviour the process needs to be supported by high quality and wide choice. CYC is focused in delivering those changes to enable all groups to make informed choices to reduce their personal carbon footprint.
26. Committed/ Funded Investment:
- York Station Gateway improved access to major transport interchange, long term decrease in parking provision
 - York Central, improved non car mode linkage
 - Castle Gateway
 - Active Travel Fund schemes/ active mode schemes
 - ZEBRA buses – delivery of high quality zero emission bus fleet
 - Public and Internal Fleet EV charging roll out, Hyper Hubs, delivery of Council Managed infrastructure.
 - Air quality (last mile delivery) project (testing last mile delivery)
 - Smart Transport Evolution Project (STEP). Implementation of new strategic model and real time model. Readiness for Connected and Autonomous Vehicles (CAV)

- City centre access management through policy and hostile vehicle measures
 - A1237 dualling A19N to Hopgrove
 - Bus Service Improvement Plan (BSIP)2022 to 2025 – Improved bus priority and targeted fare reductions
 - Hyperhubs
27. Schemes in the pipeline but funding not confirmed:
- BSIP and ZEBRA beyond 2025
 - A1237 Askham Bryan to A19N dualling
 - Haxby Station Delivery
 - A64 Hopgrove to Barton Hill dualling (not a CYC scheme)
 - National Rail enhancements on East Coast Mainline, Scarborough line and to Leeds and Manchester
 - Extend network of delivery hubs and create policy around
 - LCWIP (Cycling and Walking)development of pipeline of active travel schemes

EV Charging

28. CYC pioneered public charging for electric vehicles (EV) when launching a public charging network for EVs in 2013. These have recently been refurbished.
29. Since then the EV market has developed significantly, leading the Government to announce that all new cars and vans will need to be fully electric by 2035, with the sale of new conventional and hybrid petrol and diesel engines ending in 2030, and plug-in hybrids ending in 2035.
30. To guarantee the best result for residents, CYC continue to directly own our charging network. With two Hyperhubs opening in the last few weeks and a third at planning with a government funding bid submitted for a fourth.
31. This allows us to plan how the network will grow, set tariffs, makes us directly accountable, and enables us to deliver next generation chargers as quickly as possible. We think this is the best way to approach an issue that we recognise is key in enabling the decarbonisation of road transport

32. By maintaining ownership of a core network we can set user tariffs ensuring that we have control over one of the critical factors in delivering a charging network for all. We are also able to deliver next generation Ultra Rapid facilities that currently have a challenging business case for commercial providers, guaranteeing access for York to next generation infrastructure at the earliest opportunity.
33. The Council have adopted an Electric Vehicle Strategy that recognises the challenges of terraced streets and addresses that through city centre charging in car parks.

TIER Mobility

34. Tier have achieved modal shift onto completely new forms of transport through the scooters as part of the Department for Transport Trials. This maybe something that the committee want to understand and could invite Tier to present to them.

How do you change behaviours?

35. Investment in new infrastructure – cycle lanes, bus lanes, improved bus service frequencies, lower bus ticket prices, overcoming severance by rivers/ big roads for sustainable modes etc. Some of this is both difficult and expensive to achieve.
36. In York many of the easier things have already been done. The changes are increasingly more challenging. For instance delivering fully LTN 1/20 compliant cycle lanes is particularly difficult due to the highway layout. It also often means reallocating existing road space from one mode to another which is often difficult given the constrained space.
37. There are new opportunities to improve (e.g. the TIER scooters) but whilst positive the overall impact is small (e.g. if TIER have achieved mode shift of say 30,000 car trips, this is a small proportion of the 100 million + car trips in York over that time). Capital expenditure funding generally obtainable and some already obtained (e.g. BSIP).
38. Population churn and lifestyle changes e.g: people moving house and jobs; life events to residents, retirement; new people coming to York; changes to who lives in York (e.g. linked to house

price affordability); new spatial distributions of population (e.g. Local Plan); health challenges which cause people to change their lifestyle (could be more or less car use); rising environmental awareness; changes in post-covid working and shopping patterns; and changes in energy prices etc.

39. Consistency of approach over the medium to long term – this is identified as the key in places which have achieved effective mode shift including York. It is not individual measures so much as the cumulative effect of lots of measures (not all of which will work, necessarily) over time as population churn takes place.

What influences behaviour choice

40. A behaviour is an observable action Who does what, when and how? It is NOT a change in attitude, being aware of something, being engaged or a culture shift. It is someone doing something differently that can be measured.

41. The table below summaries factors which influence behaviour choice

Messenger	we are heavily influenced by who communicates information
Incentives	our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
Norms	we are strongly influenced by what others do
Defaults	we "go with the flow" of pre-set options
Salience	our attention is drawn to what is novel and seems relevant to us
Priming	our acts are often influenced by sub-conscious cues
Affect	our emotional associations can powerfully shape our actions
Commitments	we seek to be consistent with our public promises, and reciprocate acts
Ego	we act in ways that make us feel better about ourselves

Contact Details

Author:

Michael Howard

Interim Head of Active and Sustainable Transport

Chief Officer Responsible for the report:

James Gilchrist

Director of Environment, Transport and Planning

Report approved: X

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