Comments on Behavioural Change from John Booth

To: WBC Climate Emergency Working Group

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I have a long history of activity with Reading Friends of the Earth; for four years (2013-2016) I volunteered on the Board of Reading Climate Change Partnership where I was also Theme Lead for Low Carbon Development; and I was formerly employed as environmental co-ordinator for a local site of a major company with ISO14001 (Environmental Management System) certification.

I understand that currently the three main focuses of the Working Group are: behavioural change; transport; and public engagement / deliberative processes

Over the years I have often commented on transport assessments relating to planning matters but I have no particular experience relating to behavioural change. So I have drawn on various contacts and sources (many quoted without attribution) to prepare these comments. They are my own and should be viewed as coming from the perspective of an independent concerned citizen. Working group members and WBC officers may well be familiar with all or most of these ideas and opinions, but I hope they prove useful.

John Booth 26th March 2021

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Public engagement / deliberative processes:

Introduction:

Climate Change – it's not rocket science – it's <u>much</u> more complicated.

I have looked at the January 2020 and July 2020 versions of Wokingham's Climate Emergency Action Plan. The July version is much improved - I hope the actions are being progressed and going well, and that the next version will be further improved with fewer un-defined timescales and TBC's.

Interim targets should be set for the next three years as well as for 2030. Actions should map to the presentation of budget figures for the next three years, and as well as £ should show both staff time required (so that adequate staffing can be put in place) and expected impact on emissions.

The Plan is right to acknowledge that success will depend on central government actions and changes but it does not propose local actions to influence the government. Behaviour change and political action are not two separate things, we need the political changes to help people change their behaviours, and people need to see the government (at both national and local level) leading by example to encourage them to act.

There should be actions in the Plan to influence central government to change laws, tighten standards, and supply funding to support local initiatives.

In particular central government must be persuaded to:

- **Implement a fair system of carbon pricing** to internalise the economic externalities so that businesses have more certainty and individuals, businesses and other sectors won't see others as 'freeloading' on their efforts.
- **Put in place road pricing on trunk roads** to make road funding fairer and replace fuel duty as we switch to electric vehicles. Also so that local authorities can easily 'piggy-back' on the technology and back office to introduce local pricing regimes to reduce congestion and pollution giving economic and environmental benefits. https://policy.friendsoftheearth.uk/insight/eco-levy-driving-cut-carbon-clean-toxic-air-and-make-our-towns-and-cities-liveable
- **Implement national schemes to support investment in building retro-fit, renewable energy, etc. to make rapid progress and avoid a 'postcode lottery'.**

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Detailed Comments on aspects of Wokingham's January 2020 Plan

Behavioural Change

Change comes about in response to a combination of personal values and beliefs, sticks, carrots, and the availability and the cost of effective technical solutions. But the implementation of sticks, carrots and solutions takes time, requires finance, and depends on political action which in turn depends on capturing hearts and minds.

The public don't understand the scale of change required – nor what is more and what is less effective. Addressing single-use plastics and tree-planting are useful but far from enough to make the world safe, but those are the two responses most in the public mind.

I imagine a cartoon figure saying "I've just sorted our recycling, now I'm off to Hawaii for a holiday" … and I was once told that a friend's friend had said it was OK to fly to Hawaii because they were travelling by 'public transport' …

Wokingham should put in place a dedicated, expert, and well-resourced 'Communication and engagement team' to work across all local media.

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Comments on Actions in Original Plans:

Page 23: **Changing Behaviours - Engagement & Communications - Activities of Council Staff**

All seem good ideas to pursue – some comments in bold below.

- Ensure that the theme of net zero carbon is embedded in the council operations and encourage behavioural change
    - **Not sure how this has been approached – is carbon impact included in estimates of spend on projects approved by the Council?**
    - **I understand that scope is limited to emissions and energy use within the Borough and am concerned that this may mean that embodied carbon (e.g. in materials 'imported' for buildings or roads) is ignored.**
- Setting up a Green Team made up of staff interested in sustainability action
- Encourage council staff to adopt sustainable modes of transport
- Requiring carbon targets on our suppliers and taking carbon dioxide emissions into account when procuring goods and services
    - **There are standards for environmental management and reporting. Has the Council considered a policy that significant contracts only go to suppliers certified to ISO 14001 (Environmental Management), ISO 14064 (Carbon Accounting), and/or ISO 50001 (Energy Management)?**
- Establish corporate principles for internal and external operations undertaken by the council

- Create a climate emergency communications plan
    - **This is very important to encourage support for local and national actions. Important to both have positive short-term messages and news as well as a resource of longer-term reliable information being available to local people.**
    - **Different levels of on-line material – suitable for primary school, GCSE, and adult/professional levels of interest and competence - should be easy to find by target audience.**
    - **Good to include events to 'meet the public' by street stalls, stalls at public events etc.**
- Consult with staff members, schoolchildren and businesses on their carbon neutral ideas as part of a wider engagement programme
- Carry out a consultation with residents to gather ideas on reducing the Borough's carbon dioxide emissions
- Engage with the charity and voluntary sector to aligned their efforts with the climate emergency strategy
    - **Could mention religious organisations and faith groups?**
- Raise awareness of the benefits of active and sustainable travel through the My Journey social media feeds, in presentations to school children and businesses, at events.
- Arrange a Fit for Business event to support business in becoming net zero carbon and educate entrepreneurs in sustainable practices
- Create partnerships with local business and provide the opportunities for the delivery of new and/or green technologies which will allow the low carbon economy to grow in the borough

Page 21: **Sustainable Schools Programme**

All seem good ideas to pursue – it's often argued that enthusiastic children change the behaviour of their parents and grandparents, but it's important that they and their elders have appropriate resources available to correct any misunderstandings! (see 'communications plan' comment above).

Proposed events should be repeated annually.

- Engage schools in the borough with climate emergency
- Support schools to implement onsite energy generation
- Obtain feedback from school children on the Climate Emergency
- Climate conference to be host for the students of secondary schools in March 2020
- Hold the Climate Competition for students to implement their own sustainable ideas
- Launch an environmental awards for schools
- Engage local schools with various air quality awareness programmes.

Behavioural Change: Comments, References and Links:

"What I tell you three times is true" *(Hunting of the Snark)*

"It's not what you say or how you say it – it's how often you say it!" *(Someone selling advertising on commercial radio in 1980s)*

But as well as a degree of repetition it is important to match messages to the intended audience – different campaigns on different media will reach different people.

Multi-message – examine different reasons and measures to achieve the same end.

As well as a daily changing 'social media' presence WBC should have an official, reliable, WBC Climate Emergency site giving both local information (Council policies, local providers) and general guidance – the latter perhaps externally curated by a partnership of local authorities or NGOs.

It is good to see that the Woodley/Earley Chronicle has started running a 'Climate Change' page.

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Friends of the Earth 2019 Policy Paper **"Climate emergency – system change v lifestyle change**" Climate emergency – system change v lifestyle change | Policy and insight (friendsoftheearth.uk) emphasises that lifestyle change and political action shouldn't be seen as polarised.

'Every Little Helps' is not enough. People are happy to make changes that are convenient … but … seriously need to create narrative to emphasise co-benefits – and have an honest PLAN that informs people of the scale of changes required.

Draws on Ashden paper "Climate Action Co-Benefits" of which Chapter 6 CAC-TOOLKIT-CHAPTER-6.pdf (ashden.org) addresses behavioural change. It gives detailed examples … and seems to call for 'action all areas'.

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Friends of the Earth 2019 Policy Paper **"Government has key role in shifting us to green lifestyles"** Government has key role in shifting us to green lifestyles | Policy and insight (friendsoftheearth.uk)

"These changes…will not happen at the pace required unless policy first removes obstacles to change in markets and consumer choice."

Positive feedback loops are important: **"**Better information about the environmental impacts of taking action to reduce emissions is a motivator – if you can see progress, it encourages you to do more. In our behaviour change work at Friends of the Earth we've

seen this approach reinforced – people want to see the progress they're making, both individually and collectively."

The FoE paper was based on a 2019 report for the Climate Change Committee on **"Behaviour change, public engagement and Net Zero"** Behaviour-change-public-engagement-and-Net-Zero-Imperial-College-London.pdf (theccc.org.uk)

"Policy for behavioural and societal change for Net Zero scenarios may best be informed by two inter-dependent strategies:

1. *enable consumers to take specific concrete actions that deliver large emissions reductions*
2. *create a wider context that nurtures public engagement with action on climate change*

"Breaking with previous messaging to households to make small and easy changes, high-impact shifts in consumer behaviours and choices are needed that are consistent with the scale of the climate challenge, build optimism and commitment, and give weight to new ambitious narratives that inspire wide public participation.

"New, compelling narratives could play an important role in inspiring and mobilising mainstream participation in solutions, adoption of technologies and shifts in behaviours."

"The public do not feel connected to the climate challenge. Consequently, behaviour change is limited and Government and MPs do not have a sense of having a mandate from voters to champion, or act on, climate issues"

"Narratives include *human rights and inter-generational justice* - backed-up by some success in legal cases against governments and corporations - and *popular rebellion* or *uprising* (Extinction Rebellion) – which offers the identity of 'rebel' but will also polarise attitudes. The recent rise of the narrative of a *climate emergency* is a promising example."

Lower-carbon choices need to be seen not only as important and urgent but also normal, easy, and in alignment with other day-to-day concerns

The Climate Change Committee report contains detailed comments on transport, domestic heating, and sustainable diets. Most of the actions primarily fall on central government – but local authorities and individuals can add to pressure for effective action and use the information to inform local actions.

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The Climate Change Committee has recently released these slides **"The Path to Net Zero - Individual action in the Sixth Carbon Budget"** The-Path-to-Net-Zero-The-role-of-individual-action.pdf (theccc.org.uk) They address Behavioural Change; the Sixth Carbon Budget; and the outputs from the Climate Assembly UK.

Behavioural change:

It identifies three key behavioural principles relevant to post-Covid recovery:

1. The power law of practice
• Switching to new behaviours is hard (and individuals and companies) • We get faster and more efficient predictably • The longer lockdown/social distancing is in place, the more likely new behaviours will be more efficient than the old

2. The mind as a "comparison machine"
• We are more adaptable than we think! • So many adaptations may seem challenging, but will actually be "painless" (e.g., dietary change, less travel) • But not for everything • Crucial test: increasing or decreasing satisfaction with new behaviours over time?

3. Renegotiating the social contract
• People can, by mutual agreement, change the 'rules' of appropriate behaviour remarkably quickly
• Which rules will "stick" depends on how much we see the new logic of behaviour as:
- *Specific to the emergency, or the way of the future*
- *We need Net Zero to help shape which rules we retain (e.g., reducing carbon intensive activities such as aviation)*

Sixth Carbon Budget:

In an overview of the role of behavioural and societal change in meeting the Sixth Carbon Budget it finds behavioural change is important but far from sufficient:

- Largely societal or behavioural changes – 16%
- Low carbon technologies and societal or behavioural changes – 43%
- Low carbon technologies or fuels, not societal or behavioural changes – 41%

For particular sectors:
Transport: 19% behaviour change; 76% uptake of new technologies
More detail in slides … 17% reduction in car demand by 2050

Agriculture and Land: Diet change (from meat and dairy); Food waste reduction. Need to use about 20% of agricultural land for sequestration. (More detail in slides)

Residential Buildings: 22% of saving from behavioural change.

Climate Assembly UK

Made wide-ranging recommendations including progressive taxation of air travel, promoting electric vehicles and public transport, better information to promote informed choice including improved labelling of goods about carbon emissions and recycling.

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Carbon pricing:

This is not within the powers of Wokingham Borough Council but it and its citizens should be lobbying the government to implement improved and widespread carbon pricing (to replace the EU Emissions Trading Scheme) and should be working to explain it to local people.

'The polluter pays principle' is a long-established environmental concept – advocated to promote environmental benefits, equity, and economic efficiency. It is a way to use market mechanisms to correct for expected long-term or short-term 'externalities'. 'Pigouvian taxation' is an academic theory on the general principle that society benefits if the market prices-in indirect impacts of actions. https://en.wikipedia.org/wiki/Pigovian_tax

The previously cited report to CC Committee Behaviour-change-public-engagement-and-Net-Zero-Imperial-College-London.pdf (theccc.org.uk) has detail on this. Suggests framing it as a 'fee' or 'climate contribution' or 'eco-levy' rather than a tax. **"A policy measure with potentially the greatest potential to make the context for public participation visibly fairer and more consistent is a carbon fee with public dividend."**

"Carbon-pricing initiatives are spreading at an unprecedented rate and, with the prospect of the UK leaving the EU Emissions Trading System as a result of leaving the EU, the UK Government has an opportunity to change carbon pricing, to which it is committed in principle."

"**Political acceptability is seen as the biggest obstacle to the introduction of ambitious carbon pricing schemes, but effective use of the substantial revenues raised offers a way of increasing public acceptance.** With the opportunity for innovation in the field of carbon pricing offered by Brexit, the option of an independent carbon tax with revenues directly returned to the populace in the form of a carbon dividend has been proposed.

"**This combination of carbon fee and public dividend could give voters an immediate connection to, and interest in, the fight against climate change and turn "an otherwise regressive and unpopular carbon tax into a popular and even populist policy that promotes more inclusive economic growth and enables the vast majority of UK citizens to benefit financially from this new climate solution"**

A 2019 FAQ from the Grantham Institute goes into more detail https://www.lse.ac.uk/granthaminstitute/explainers/what-is-a-carbon-price-and-why-do-we-need-one/ It reports "The Carbon Price Floor was introduced in 2013 at a rate of £16 per

tonne of carbon dioxide-equivalent (tCO_2e), and was set to increase to £30 by 2020. However, the government more recently decided to cap the Carbon Price Floor at £18.08 till 2021." It cites another 2017 report which estimated that "the appropriate carbon price across the world will need to be US$50–100 per tCO_2e by 2030, to be consistent with meeting the goals of the Paris Agreement."

Countries in the lead on this include Canada, Sweden and Eire.

The EU is to implement a 'Carbon Border Adjustment Mechanism' (CBAM), which would apply a carbon levy on imports of certain goods from outside the EU in order to avoid "carbon leakage" - the shifting of greenhouse gas-emitting industries to places outside the EU in order to avoid tighter standards. Carbon border levy will stop firms shirking EU climate obligations | E&T Magazine (theiet.org)

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Transport

An effective transport network for people, goods, and freight is essential to prosperity and to quality of life, but business as usual is not an option.

Present levels of congestion, air quality, and climate changing emissions are all unacceptable. The wide-area simulations for 'Smart M4' predicted that by 2037 compared with 2009 there would be 31% more trips, average speed reduced by 9%, and average journey time increased by 11%. For carbon dioxide emissions there was a 7.9% increase between 2013 and 2037 – despite anticipated adoption of low-carbon vehicles.

Friends of the Earth 2020 report – 'Making transport fit for the Climate Emergency' https://www.transportforqualityoflife.com/u/files/201203_FoE_Activists_Briefing-Making_transport_fit_for_the_Climate_Emergency_FINAL2.pdf says:

"The carbon arithmetic is inescapable. It means that we must instigate a rapid transformation of our transport system to reduce car use, as well as achieving a faster transition from petrol and diesel to electric cars and significantly cutting aviation emissions"

"Rapid action to reduce car use will only be fair and command public consent if it takes place in parallel with big changes to our transport system to give people decent, clean and affordable ways of travelling to work, education and services, by foot, bike or low-carbon public transport."

The document includes recommendations for local authority actions in four 'tiers' – 'should do'; 'should do to show leadership'; 'require more powers and funding'; and 'national lobbying required'.

The post-Covid reduction in travel – working from home etc. - should be welcomed. Transport for the South East has published a post-Covid analysis saying the "overall reduction in the total number of car trips is forecast to last at least three years. It is unclear how this will change beyond this period, but we could well be planning in the medium to long term for lower levels of car traffic than previously envisaged."

The "fundamental law of traffic congestion" (https://www.nber.org/papers/w15376) suggests that traffic tends to increase to fill the roadspace available so any proposed new road-building should be subject to critical appraisal.

A realistic general carbon tax (or fee, as discussed above) should ideally be part of a fair approach to reducing carbon emissions – putting transport on a level footing with other activities – but:

- It is unlikely to be implemented very soon in the UK
- It would not address local impacts such as air quality and congestion which must be addressed by local initiatives to promote modal shift and to reduce traffic.

So even if government takes further action on carbon pricing it is very much up to local authorities to make changes.

Comments on Actions in Original Plans:

Page 19: Transport: A good list of relevant topics and actions but rather vague as opposed to specific. Need to be more specific with SMART targets, costs etc. Should include measures to get freight off roads and onto rail for deliveries to Berkshire.

- Local Transport Plan (LTP4) will include consideration of the future of transport and CO2
    - **Must do more than consider it! Should aim to reduce vehicle use as well as providing for and encouraging low carbon alternatives.**
    - **LTP4 should be informed by modelling sensitivity to traffic volume of different impacts:**
        - **Average journey time**
        - **Value of time saved due to reduced congestion**
        - **Emissions of NOx and particulates within Wokingham**
        - **Emissions of CO2 across the whole simulation model area, not only within Borough boundaries.**
    - **LTP4 should be informed by evaluation of possible introduction of Workplace Parking Levy and/or a number of road pricing options.**
- My Journey to increase focus on CO2
- Enabling mode shift to increase active and sustainable travel opportunities across the borough
- Identify and improve key routes to get maximum uptake of walking and cycling
- Make public transport more convenient and greener to operate
    - **And cheaper for everyone – perhaps free for under-25s?**
- Increase the electric vehicle charging network in the borough
    - **York seems to be pioneering a different approach to EV charging that may be worth investigation**: https://www.york.gov.uk/EVChargingStrategy
- Considerations to pedestrianising retail centres except to buses.
    - **Need to provide for bikes and people with limited mobility!**
- Bike storage and car clubs to be installed around the council buildings
    - **Bike storage and car clubs should be developed widely.**
- Cross Berkshire Cycle Route
- Improve air quality in areas of concern.
    - **How? Electric vehicles will reduce NO2 but not so much influence on particulates.**
- Introduce intelligent transport systems – traffic lights and digital signage linked to the emissions levels
- Rotation of the road signage (digital signage) to increase awareness of emissions levels
- Assess the effectiveness of introducing green walls, green roofs and other plantings around main roads
    - **These measures are more about air quality, wildlife, and water management than climate change?**
- Banners up to encourage motorists to switch engines off whilst queuing
- Introduce measures to discourage and penalise vehicle idling

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Transport: Comments, References and Links:

Climate Change:
Transport is now the single largest source of greenhouse gas emissions in the UK, accounting for 31.4% of Wokingham's emissions in 2017 according to the Climate Emergency Plan – without counting out-of-area emissions from road, rail and aviation travel by Wokingham people, and freight transfers.

The Committee on Climate Change (CCC) has highlighted the lack of progress in the transport sector, and made clear that without rapid action, the fourth and fifth carbon budgets (covering the periods 2023-2027 and 2028-2032 respectively) will be missed.

A study for Friends of the Earth by 'Transport for Quality of Life' suggests that the level of traffic reduction needed by 2030 could be anywhere between 20% and 60%, depending on factors including the speed of the switch to electric vehicles and how fast the electricity powering them is decarbonised.

Congestion:
Long ago comedian Ben Elton joked to a rally in support of the Road Traffic Reduction Bill that when he saw a TV advertisement for a beautiful fast car speeding over a scenic highway he didn't want to buy the car, he wanted to buy the open road.

Businesses, visitors and residents all suffer from congestion, and it contributes to increased carbon emissions and dirtier tail-pipe emissions. It is likely that the greatest economic impact is from loss of time.

On trunk roads the 'environmental speed limit' is said to be around 55 mph – good for fuel consumption and in heavy traffic actually gives more capacity (vehicles per hour) than higher speeds because vehicles can run closer together and traffic flow can be smooth. And accidents will be less serious …

Junctions are a major cause of delays – as soon as traffic volumes exceed the number of vehicles that can pass a junction in a single phase of the lights, or before having to give way to other vehicles at a roundabout, average journey times increase non-linearly. Conversely roadspace can be taken for bus lanes or cycle lanes without a major impact on traffic throughput if the junction capacity is retained.

Options for Improvement:
To reduce traffic requires some combination of fewer journeys and/or modal shift to multi-occupancy vehicles and cycling and walking. To reduce pollution requires some combination of traffic reduction and change to 'greener' types of vehicle.

The trends to on-line shopping and working from home, and reduction in proportion of young people driving cars, are counteracted by the growth in housing and population mandated by central government planning policies.

A Friends of the Earth report "Transforming transport funding to meet our climate targets" https://policy.friendsoftheearth.uk/insight/transforming-transport-funding-meet-our-climate-targets argues for three principles:

- Reallocate transport budgets from climate 'bads' to climate 'goods'
- Local authorities should have powers to raise their own funds for sustainable transport
- Increased funding for sustainable transport should be drawn from all beneficiaries

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Travel Plans:
Larger companies should be required to produce Travel Plans covering business use and commuting. They should offer cycle allowances, provide cycle parking and showers, and promote public transport and car sharing.

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***Workplace Parking Levies*:**
The Nottingham experience https://www.nottinghamcity.gov.uk/wpl shows that workplace parking levies deliver some direct reduction in traffic as well as funding for other initiatives. They could be introduced to address heavy use of private cars for commuting.

- Fairly quick and easy to set up – no special equipment or 'back office', individuals don't pay unless their employer charges them.
- Should be effective in reducing rush hour commuting.
- Charge in Nottingham from April 2021 will be £428 per space for employers who provide 11 or more liable places.
- Could be graduated by location in Wokingham, higher charges where congestion worst?
- Provide funding for transport improvements
- Encourages employers to reduce parking spaces and promote alternatives
- Parking levy could be discounted if businesses can show that significant numbers of their staff commute in multi-occupancy vehicles – whether by 'car sharing' or by using vehicles provided by the company – at cost of some additional bureaucracy.
- But are essentially unfair in that costs would fall on local companies but not on other road users – people passing through or driving for purposes other than employment would benefit - free-loading on companies that paid the levy or reduced workplace parking.

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Road pricing:
As the shift to electric vehicles continues government revenue from fuel duty will fall so other ways must be found to pay for the road system.

Road pricing can now be much more sophisticated than 'cordon-based' examples such as the London 'Congestion Charge' or the Stockholm scheme. Fees can be varied according to

time of day, route taken, type of vehicle, and even the levels of air pollution experienced or expected in a location. Exceptions or discounts can be allocated to special cases.

The technology can be applied to create 'Clean Air Zones' and/or manage congestion – the requirement to pay fees will deter unwanted traffic and provide funds to implement improvements. Charging Clean Air Zones are a classic example of the 'polluter pays principle'.

Every additional traveller on a busy road network adds to the delays experienced by other road users, as well as experiencing delays themselves. Proportionate congestion charging can persuade some travellers to mode-shift or travel at less-congested times, and provide funding to support alternative options. People and businesses who travel and pay the charge will enjoy valuable time-savings.

Modelling future traffic scenarios will shed light on the implications of traffic growth, and the economic benefits of traffic reduction. Sensitivity testing should be carried out, and this will allow the economic impact of more or less traffic to be calculated.

For example, sensitivity testing for the Grazeley 'Call-in Inquiry' in 1999 showed that, for a congested scenario:

- A 5% fall in traffic volumes gave approximately 30% fall in average journey time in the morning peak.
- Reducing peak hour traffic by 5% would reduce total journey time by 4,480 hours per day, worth £15,098 per day at 1998 prices.
- So there would be economic break-even by charging about 25,000 vehicles about 60p each to fund spending £11.89 per day (e.g. on subsidy for public transport) for each vehicle induced not to travel in the peak hours.

Friends of the Earth document **"An Eco Levy for driving: cut carbon, clean up toxic air and make our towns and cities liveable"** https://policy.friendsoftheearth.uk/insight/eco-levy-driving-cut-carbon-clean-toxic-air-and-make-our-towns-and-cities-liveable is well worth reading. It found that:

"Charging for driving prompts people to think twice, and to switch to non-car modes of travel for a significant proportion of their trips. This can reduce urban traffic volumes by as much as a fifth (and sometimes more).

"For example, Stockholm introduced a congestion charge for driving into the city centre in 2006. A few months before the charge came in, the city made major improvements to public transport, including more frequent rush hour services, 16 new bus routes to the city centre, 14 new express bus routes and 1,500 new park-and-ride parking spaces at railway stations.

"The evaluation of the Stockholm congestion charging scheme found that although this expansion of public transport was a prerequisite for charging, on its own it had little effect. However once the congestion charge came into force five months later, there was an immediate reduction of nearly a fifth in the number of vehicles crossing the charging 'cordon'."

The technology for **Automatic Number Plate Recognition** (ANPR) is available and affordable – and is widely in use for bus lane enforcement and parking control. There are many ways that it can be deployed and many different charging strategies:

Deployment options:

- Cordon-based – charging to enter a wide area as in London and Stockholm
- Allowing general vehicles to pay to use bus lanes – either with or without a parallel free-to-access lane for general traffic.
- Charging for access to particular stretches of road or at particular junctions to achieve local traffic reduction
- Charging for use of a major route – e.g. with several cameras to allow charge to depend on number of cameras passed – or for driving within an area. Charging by distance, time and place.
- Cordon monitoring around an inner area or the whole built-up area

Charging strategy options:

- Penalty charge on vehicles forbidden to use a particular road – whether general vehicles in a bus lane or a particular engine type in a clean air zone.
- Charge varying with time of day
- Charge varying with engine standard and type as a proxy for air quality emissions
- Charge varying with residency status of registered owner or other individual discounts
- Charge per day or charge for each detection

The right choice for deployment and charging strategy will require technical and economic assessment and political judgement.

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Public engagement / deliberative processes.

Is progress being made with the Climate Emergency Advisory Group proposed in the Plan?

Wokingham's strategy reads very much as a council-led strategy. Reading, in positioning its strategy as being led by a multi-agency partnership, with the resulting strategy being adopted by the council once signed off by the partnership, has sought to share responsibility for delivery more widely.

Outreach should be easier with many companies, voluntary groups etc. represented and involved. While behavioural change impact may be limited it will still be valuable to encourage individual action through behaviour change initiatives for the feelings of personal agency it gives and also because, collectively, the impact can be substantial.

Narratives of a positive future to which people might want to aspire are, arguably, more motivating than warnings of a relatively dystopian destination if we don't change our ways now! Hope is a great motivator.

The behaviour change challenge is:

- Making sure that we are telling a good story that we're describing a destination that people would want to reach
- Making sure that the action plan does enough, well, that others want to voluntarily align their own actions to increase ambition and speed of travel. (And existing partners feel good enough about what they did to want to do more!)
- Making it easy for individuals to see how they can get involved, at home, work, school, in their community.

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