Department for Transport

THE BEHAVIOURAL INSIGHTS TEAM

A Moment of Change: Increasing Cycling Uptake

Final report executive summary

A research project conducted by the Behavioural Insights Team on behalf of the Department for Transport.

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Executive summary

Background and objectives

The Department for Transport (DfT) and the Behavioural Insights Team (BIT) recognise that as a result of the COVID-19 pandemic, there is a rare, national 'moment of change' leading to an important opportunity to promote cycling uptake. Research conducted by BIT and others shows that moments of disruption and forced experimentation in our mobility routines can lead to sustained changes in habits. The summer of 2020 saw a significant spike in the number of people cycling, but in order to cement this behaviour before old habits revert, a rapid policy response is required to ensure cycling is easier, safer and more appealing.

DfT commissioned BIT to deliver a rapid scoping study to i) develop a longlist of policy options to increase cycling uptake ii) prioritise 3 options to take forward, and iii) develop more detailed proposals for design and implementation. Costing of the policy options was beyond the scope of this work. However, this report provides some qualitative and relative commentary with regards to costs and reach. In all cases these policies sought to capitalise on this moment of change.

This report sets out three policy options developed by BIT in close collaboration with DfT focused on three target areas: 1) Home-movers: Targeting home-movers (a key moment of change itself, and relevant due to a backlog of movers following COVID-19) to adopt a wide variety of cycling schemes and initiatives. 2) Cycle to work: encouraging more employers to adopt and offer the cycle to work scheme and encouraging more employees to sign up to the scheme and 3) Boosting cycling uptake among high priority groups: The target audience for this area includes underrepresented groups, novice cyclists and lapsed cyclists.

Key activities and methodology

A 10-week scoping study included the following steps:

- **Rapid evidence review:** A targeted literature search to identify relevant academic and grey literature.
- **Interviews:** Seven semi-structured interviews with specialists to explore possible policy options and delivery considerations. BIT worked together with DfT to identify suitable experts, conducting five interviews to support the development of a longlist of policy ideas, and two interviews to further develop the top-ranking policy options.
- **Solution development:** We mapped the key barriers to cycling uptake, and developed a longlist of 60+ policy ideas, before refining these to approximately 30 options, each seeking to address one or more of the identified barriers.
- **Interim workshop:** We presented the longlist of 30 ideas to DfT, sought feedback, and collectively scored the ideas on their potential for impact, their feasibility of implementation, and their readiness (timescale of implementation). This led to the selection of the three policy options detailed within this report. There was generally an emphasis towards quick and low-cost options.

- **Policy refinement.** We further refined the selected ideas to articulate their basis in behavioural-science, and provide recommendations for delivery and evaluation.

Exploratory activities

Purpose of activities

The rapid evidence review and expert interviews were designed to serve two purposes. First, to gain insight into the context - to what extent are different groups already cycling? What policies exist, how effective are they, and what challenges do they face? Second, to identify and classify the main barriers to cycling, which our own policy ideas should aim to address. Here we highlight some of the key insights from this research.

Key findings

Demographic trends

Groups who are less likely to cycle include women, older age groups, ethnic minorities and people from lower income groups. Certain groups are also more likely to engage with the Cycle to Work Scheme, including those who are already physically fit.

Evidence on what works and what gets in the way

Evidence shows that a range of workplace interventions can be effective at promoting active travel, including financial rewards, social incentives and events. Case studies indicate that information provision and incentives can also be effective. However, other factors, such as the quality of infrastructure, are also paramount. Other issues identified by our interviewees include inconsistent funding, and a need to reallocate funding away from motor traffic towards active travel. More promising results were reported from the use of better place-based planning and co-creation of solutions with end users.

Safety concerns and lack of skills are also frequently highlighted (which speaks to the need for good infrastructure and segregated routes, as well as riding skills and confidence). Also important are everyday frictions and habits, to ensure cycling is easy and a default choice.

In summary, there is a general consensus in the literature that is echoed by experts in the area, that the most effective way to increase cycling uptake is through a mixture of ‘soft’ interventions, such as cycle-training, and ‘hard’ interventions, such as improving infrastructure. Though gaps in the evidence still exist, and not all studies have a high degree of rigour, a fair reading of the evidence implies that certain requisites must be in place - such as sufficient cycling infrastructure - after which soft interventions may be effective.

Key barriers identified and objectives needing to be met

In order to help us develop effective solutions, we have summarised the key barriers as follows. These are framed as ‘objectives’ which should *all* be met if cycling rates are to

significantly increase. Note that the final objective, ‘desirability’, is not emphasised so strongly within the literature. However, with reference to the COM-B model of behaviour change, we believe it remains important to ensure that once people have the *opportunity* and *capability* to cycle (which the other objectives address), there is also a degree of *motivation*.

- **Affordability:** I can afford a bike. I perceive it as good value for money and more economical than other transport options
- **Awareness:** I am aware of the benefits of cycling and am familiar with cycling initiatives and opportunities available to me
- **Infrastructure and functionality:** I feel safe cycling and can access the equipment & infrastructure that meets my needs, and makes it convenient
- **Habits and friction:** It is not overly effortful to cycle and establish cycling habits. It's easy to try it out and see if I like it
- **Skills and confidence:** I have the skills and confidence to try out cycling and to cycle regularly
- **Desirability:** I am sufficiently motivated to cycle, and I see myself as a cyclist

Policy options overview

1. Information & offers package to home movers to encourage cycling

This report recommends signposting home movers to a suite of information (paper, web, or app) to encourage and support the uptake of cycling during this major life transition. This draws on evidence that moving home can be a timely moment to promote habit change as people are planning for and setting new routines, including a change in their commute and travel to local amenities. COVID-19 may also result in an increase in home-movers due to a mixture of delays and a shift in location preferences.

The purpose of this package is to raise awareness of local cycling facilities, increase the perceived convenience of cycling, increase the motivation to do so, and address some common frictions to cycling. Information would be personalised based on the person’s location and cycling confidence, for instance emphasising local training for new cyclists, and cycling clubs or route planning for more confident riders.

This report recommends that the package consists of 3 core features 1) information on cycle-friendly routes 2) tips on existing bike storage options and planning guidance for front-of-house storage, and 3) information on local bike training. A range of optional features could also be included in the package, such as time-limited offers from local bike-shops, buy-and-sell classifieds, links to information about the cycle to work scheme, the option to securely register your bike and functionality to message other new-movers. Other motivations, such as a desire to meet new people, can also be leveraged.

The package could be delivered in a range of formats, including paper or email communications, a website or an app. These will differ in their levels of sophistication and ability to provide tailored content. It will be necessary to consider the trade-off between sophistication and cost and speed of implementation. A website or app could be more interactive, and include a triage tool so users could access a more tailored package. An app

in particular may be better for long-term use (e.g. for route planning), while a website may be preferable for one-time reference.

Information can be promoted and signposted through various touch-points including property-searching websites, local estate agents, local authorities (through property searches and council tax letters), and schools. Including signposts to the (website) at multiple points in the mover's journey may be most effective.

Timing: This may be an ongoing offer, but should be delivered at the end of major restrictions (e.g. potentially early Spring 2021) to capture the backlog of movers, and the beginning of the spring/summer season when weather is more amenable.

Delivery partners and set-up: Partnerships with local authorities will be key to access the information to update the core features so that they are in line with local initiatives and changes. Local authorities could either commit to full responsibility for this or feed information to DfT. Partnerships will also be required with organisations who are able to signpost movers to the content, though some of these (e.g. Rightmove, Zoopla) may be achievable with paid adverts rather than formal partnerships.

Implementation and evaluation: This report suggests that a website may strike the best balance between flexibility, opportunity for tailored content, simplicity and cost of implementation. Given time constraints, it may be wise to pilot the programme with a small number of local authorities, focusing on the core features in the first instance. A randomised impact evaluation should then be feasible, either randomising by individual (e.g. signposting the information to some users and not others, and measuring intermediate outcomes such as visits to the website, or follow-up surveys on cycling rates), or comparing treatment regions against comparable control regions, using a difference-in-differences approach.

Estimated costs and reach: The cost will depend heavily on the sophistication of the information and the scale of delivery. This report suggests that if creating a website or app, there are a minimum set of core features which should be included, any less than which would not produce a useful product. The most complex and costly aspect of this will likely be the route-planning feature, though efficiencies may be had (and indeed, uptake increased) by drawing on partnerships with existing platforms which have established mapping architecture but also high numbers of users. Delivering this option as a standalone app is likely to be the most costly option, with development costs significant but again, dependent on features. A website may be most economical. Should costs be prohibitive, a scaled-back version of the idea, providing simple and timely communications to new movers (e.g. sent with estate agents' welcome packs, or from land registry search results) signposting them to local cycling infrastructure and training opportunities, and using motivational language to boost interest, may achieve quite modest impacts but nonetheless be a worthwhile and cost-effective intervention.

The potential reach of this policy option is high given the large numbers of home movers. Data on new households indicates that over the past 5 years, approximately 2.1 million people in the UK have moved homes each year. On average, this is approximately 175,000 people per month. Full coverage of this audience requires working within the home-buying

and renting journeys. We also anticipate a modest peak of movers, perhaps lasting a year, through 2021 due to a COVID-19 backlog and a resetting of priorities for many people. Within this target group, it is possible to reach either a broader or more specific audience depending on features prioritised, for instance targeting more novice cyclists, or certain geographies where cycling potential is highest. A triage tool on a website or app can help tailor accordingly.

2. Cycle back to work

This report proposes rolling out a national campaign alongside a package of supporting policies to coincide with workplaces reopening, to galvanise employees to cycle to work. Many commuters working from home or on furlough will have seen their railcards expire, will have fallen out of the habit of driving, and may even have taken up cycling for leisure, and so it is vital that good habits are encouraged before old routines resurge.

The campaign should target both employers and employees. A variety of messages should be tested to identify the strongest motivating factors for each group - e.g. focusing on money saving for employees, and on staff health and productivity for employers.

The proposed add-ons to the campaign include:

1) A time-limited Cycle to Work Scheme bonus for employees who sign up in the run-up to offices reopening or just after offices reopen.
2) 'Bike-ready' infrastructure grants or loans for employers to support the installation of facilities such as bike storage - benefitting from the fact that many offices are empty.
3) A 'travelcard/petrol for bike swap' PAYS loan whereby employers can offer interest-free loans to staff to help them to buy a bike.
4) Bike training for employees to be organised at scale. Recruitment could be incorporated into the Cycle to Work Scheme, or employers could be provided with support to organise bike-training for all employees.
5) A package of administrative support for employers to ensure that they are well equipped to facilitate employees to cycle to work, and 'copy and paste' materials they can use to promote cycling within their internal communications and staff events.

Timing: This report recommends rolling this out to coincide with workplaces reopening. While it may be hard to predict exactly when this event occurs, timing will be crucial and so planning for this should begin in earnest. Key activities (including workplace grants, loans for buying a bike, and cycle training) should ideally happen *before* employees start commuting.

Delivery partners and set-up*:* For the employer-facing component of the core campaign, this report suggests working with local authorities and/or the Cycle to Work Scheme Alliance to embed information in their existing communications to employers. Direct communications, e.g. through companies house, are also possible. Workplace grants may need to be centrally administered. For the employee-facing component of the campaign, DfT could buy advertising space in prominent locations or partner with social media platforms.

A range of different partnerships would be necessary to deliver the add-ons to the campaign, including organisations such as Bikeability or Cycling UK to facilitate bike training and

collaboration with HMT to secure the resources for grants and financial incentives. These add-ons are optional and will be subject to cost-benefit analysis, but we also believe they would significantly increase the impact of the policy package.

Implementation and evaluation: The advertising campaign could be led in-house with additional support from external designers if deemed necessary. We recommend an iterative approach whereby a wide variety of options are designed and refined during early prototyping and piloting. In the first phase of evaluation, different message frames and variants could be tested on an online platform such as BIT's Predictiv. Each round of message piloting would take between 2-4 weeks. Field evaluation, if feasible, may include social media advert evaluation (to test message reach and click-through). A cluster RCT delivered via workplaces or a stepped-wedge evaluation of the national campaign would be feasible, but undertaking a robust impact evaluation may not be a top priority given the one-time-only, short-term nature of the campaign.

Estimated costs and reach: Rolling out just the main campaign (without the add-ons) would be the most cost-effective version of this policy option. This may yield more modest impacts but potentially better value for money or more feasible implementation within a short timeframe. The incentives and 'add-ons' suggested above would make this policy relatively costly (and certainly more costly that the other two options described in this report). That said, we believe much of the impact does reside in the incentives and add-ons, and so cost-saving measures should be sought - for instance drawing on existing cycle training at minimal additional cost, and working with charities such as Cycling UK to support the development of guidance and materials.

In terms of potential reach, the latest figures indicate that 16% of the workforce is on furlough leave, while 28% of adults are working from home exclusively. Though awareness and information campaigns typically have modest impacts on behaviour, combining the behavioural benefits of this timely moment of change, with the significant size of this cohort, suggests this would be a very worthwhile and cost effective effort. To further maximise reach, we recommend a blended approach which both promotes the Cycle to Work scheme specifically (which offers an additional incentive but also restricts the eligible target audience) and which presents a more general campaign around cycling to work.

While the central campaign can have great reach - indeed a large fraction of the UK working population and their employers - the 'add ons' are likely to have more limited reach due to their cost and the difficulties scaling them. These should therefore be targeted towards audiences where impacts are likely to be greatest. For instance workplace grants may be directed towards organisations which not only need them most, but which have characteristics where cycling uptake is likely to be higher as a result (for example, not in locations where cycle routes are very poor or where most employees drive long distances). Applications for such grants may incorporate a self-assessment and soft pledge from employers, demonstrating their plans to promote cycling, and indicating how many staff intend to start cycling to work.

3. Messages to build and sustain a habit

This report suggests developing and testing a series of motivational messages to help people develop and maintain a cycling habit. This would draw on behavioural science principles of habit formation, and may be similar in purpose to the 'Couch to 5k' app developed by the NHS, though would not need to be delivered through an app (e.g. SMS prompts would provide a light-touch alternative). There has been a surge in bike sales during the COVID-19 pandemic. However, there is no guarantee that the people who bought a bike during the pandemic will continue cycling, particularly through the winter. Indeed, statistics report that 42% of Britons have access to or own a bike but 71% report never cycling.

This report proposes developing messages designed to overcome common barriers to building habits. These should be informed by the large body of literature that outlines the importance of building habits gradually, preempting moments of relapse and recognising progress. The messages should also be informed by the specific barriers identified for people building a cycling habit (such as the five objectives we identified).

Additional commitment devices could be tested alongside the messages, such as nominating a buddy, setting team-level goals, and providing incentives for when goals are achieved. Messages could be personalised based on participant activity trackers. For example, reassuring and encouraging messages when activity levels are low and praise for high levels of activity.

Timing: This policy seeks to help new cyclists develop good habits, so may be effective at any point. However reach is likely to be greatest if delivered as soon as practical, given there may be more new cyclists now. Under normal times, pushing this service during the spring/early summer may also boost reach. This policy could also be linked to the previous two policies, which both seek to create new (or renewed) cyclists. Messages and features within this service can also be tailored to current events, e.g. a return to work after furlough, or local current weather conditions.

Delivery partners and set-up: Bike retailers or cycle to work scheme operators will likely be the most impactful partners to work with given their reach and contact with people who have recently purchased a bike. Partnering with second-hand marketplaces such as Gumtree and eBay may help DfT reach under-represented groups. Finally, health-tech companies such as Strava may be useful for identifying those who have recently bought a bike, and also open up potential evaluation opportunities using app data.

Intervention and implementation design: Implementation design will require input from delivery partners to advise on process and access to participant contact details. We estimate both intervention and implementation design will take approximately 3 months.

Implementation and evaluation: At its simplest, the intervention design requires the development of a series of motivational messages, which can be to varying levels of sophistication (e.g. conditionally formatted to be sent during certain events or times, or in response to certain triggers, or tailored to a greater or lesser degree based on some simple personal information provided by the individual signed up to receive them).

This report recommends starting with a pilot evaluation to test and refine draft messages and processes, though a measure of the relative impact of different messages can also be

ongoing while the service is in use, constantly iterating through regular A/B tests. A randomised experiment to measure the overall impact of the service is also possible though presents an additional challenge of collecting data on cycling behaviour from those not receiving the messages. Solutions may include giving some users a reduced version of the service, or recruiting bike-buyers into a follow-up survey and then randomising those recruits to receive the motivational messages or not.

Estimated cost and reach: This policy option is likely to cost significantly less than the Cycle back to work campaign, and potentially less than the home-movers package depending on the sophistication of that option. Here, a very low-cost service could be provided using SMS messages. HMG has recently adopted large-scale SMS systems through COVID-19, and so much of the architecture is in place and may be repurposed. It is also greatly in the interests of cycle retailers to promote more cycling. Given partnerships with retailers will be necessary anyway, sharing the administrative burden, or seeking sponsorship, may help reduce costs further.

The potential reach is again high. Estimates suggest around 2.5 million bikes are bought each year in the UK (2018 data). Not only is this number high, but the people buying these bikes are clearly a prime target audience - showing significant intent to start cycling, even if many fail to do so as regularly as they hoped after purchase. This is on top of the large number of people who own a bike and report not cycling who could also be reached if the service is offered more widely than just through bike sales. Figures also indicate that there are large numbers who bought a bike during the pandemic; in April and June 2020, bicycle sales were up 63% year-on-year, highlighting the importance of supporting good habit creation immediately.

Clearly, not all of these people will choose to receive the motivational messages (though an opt-out system would significantly increase reach). Nonetheless, the current political climate may be more conducive to this level of intervention, and helpful guidance from the government in individuals' daily habits has become more normal, for example with recent popularity of the 'Couch to 5k' app. We believe this bodes well for a simple, low-cost and helpful nudge from the Government to get on our bikes.