

# A Sustainable Transport System for the North West: Putting the Green New Deal into action

*Report for Gina Dowding MEP*

ALISTAIR KIRKBRIDE  
& LISA HOPKINSON  
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The findings in this paper remain those of the authors and do not necessarily represent the views of Transport for Quality of Life.

# Executive Summary

The climate emergency requires us to rapidly and radically transform local and regional transport systems in the North West of England. This is possible, and this report explains how.

In the North West, transport accounts for over a third of carbon emissions and it is the only sector where emissions are still rising. Switching to electric vehicles (EVs) and electrifying the rest of the transport system is simply not going to happen fast enough to avert the worst of the climate emergency. Furthermore, replacing petrol or diesel cars with EVs does little to tackle the inequalities apparent in our current transport system.

Informed by the principles of the Green New Deal, this report takes recent in-depth analyses of transport policy interventions that focus on carbon reduction and applies them across the variety of places that make up the North West of England. This is the first time this has been done for a single UK region. It is both evidence-led and mode-agnostic, exploring opportunities that are largely within the gift of local government and transport bodies within the region, while recognising many changes are also needed at national level.

The report identifies a number of local priority interventions that would be most effective at reducing carbon emissions in a way that is fair, while also improving air quality, reducing social exclusion and transport inequalities, and providing new and better jobs. Key findings include:

- Deregulation lies at the core of the poor performance of local rail and bus networks. Re-regulation of bus services is needed to reverse the alarming decline in bus use seen over the last decade
- A programme of infrastructure investments is needed to provide much-needed capacity to the rail network, prioritising congested sections in Greater Manchester and on the West Coast Main Line, along with additional rolling stock, extending the length of trains and selective re-opening of rail routes
- The state of the climate emergency leaves no room for more road building. Up to £2.9 billion has been allocated for road schemes in the North West between 2015-2020, yet free bus travel for all would cost £0.3 billion per year
- Combining e-bikes with an extensive network of segregated cycleways in towns and cities could substitute for significantly more car mileage than commonly assumed. The North West's two City Regions and urban centres of Lancaster, Preston and the Fylde towns have the highest potential
- Even with improved public transport and active travel options, many people will still travel by car due to habit and social norms. This must be discouraged through traffic restraint measures such as road pricing in the form of a mileage-based Eco Levy. This could be combined with free local public transport to win public support
- Achieving these goals could create an estimated 37,000 jobs in the North West through the operation and maintenance of buses and trains alone, and provide additional added value through improved air quality, healthier livelihoods, safer neighbourhoods and a fairer society.

# 1. Introduction

Transport is now the UK's biggest contributor to climate change. It is also the only sector where emissions have risen since 1990 and are continuing to rise.<sup>1</sup> A series of briefings for Friends of the Earth (FoE) have set out the transport measures needed to meet the commitments of the Paris Agreement and to ensure a decent transport system that works for everyone.<sup>2</sup> These briefings show that while electrification of road travel is essential, this will not be sufficient to reduce emissions by the speed and scale necessary to meet the aspiration of the Paris Climate Agreement. We will also need to reduce car mileage by between 20-60% within a decade.<sup>3</sup>

Inspired by Gina Dowding's Green New Deal in the North West report published in October 2019,<sup>4</sup> this document takes some of the recommended measures from those briefings and for the first time applies them to a specific region. While many of the FoE measures require national policy and legislative changes, this report tries to show what is possible within existing powers and with powers available to bodies within the region.

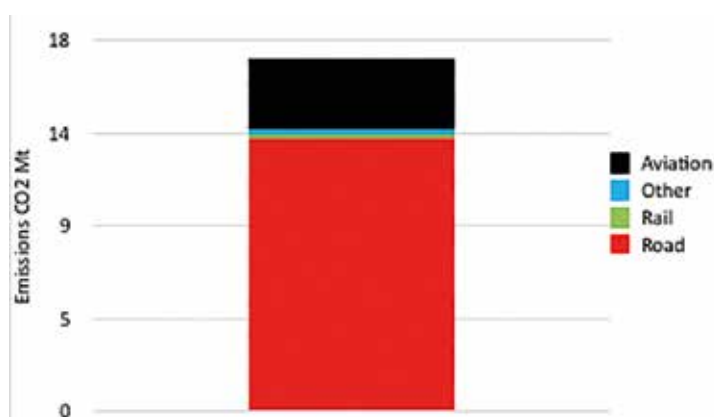
Despite over 70% of councils in the North West declaring climate emergencies to date<sup>5</sup> few have developed detailed action plans. This paper sets out some of the transport interventions required to ensure the North West can meet its climate obligations while at the same time improving air quality, tackling social exclusion, reducing transport inequalities and providing good quality jobs.

This paper focuses primarily on reducing car use. Other important measures that are not considered further in this report include decarbonising freight and maritime travel, shifting freight to rail and water, ensuring that land use planning leads to reduced need to travel, and taking action to radically reduce air travel.

# 2. What's the problem?

## 2.1 CARBON AND AIR POLLUTION

Transport currently accounts for over a third of the North West's domestic carbon emissions, excluding aviation, and is the only sector where carbon emissions are rising.<sup>6</sup> Cars account for the majority (around 60%) of road transport emissions<sup>7</sup> and therefore are the focus of this report. However, action is also needed to radically reduce demand for air travel and road freight travel.<sup>8</sup> The region's airports are a significant part (20%) of the North West's transport emissions (see Figure 1).<sup>9</sup>



(a) Due to the lack of a consistent dataset for transport, domestic transport emissions data is from 2017 and aviation emissions data is from 2016. Note this figure does not include shipping, military transport, or exports.

**Figure 1: Domestic transport and aviation emissions in the North West in 2016/17 (a)<sup>10</sup>**

The Tyndall Centre for Climate Change Research suggests that transport carbon emissions in the North West must be cut by around 10-14% per year between now and 2048 to make a fair contribution to meeting a 'Paris compliant' carbon budget.<sup>11</sup> This is a significant challenge, given that based on current policies road traffic in the North West is forecast to increase by over half by 2050 and any reductions in carbon from increased car electrification will fall far short of what is needed.<sup>12</sup>

***At current emission levels the North West would use its entire carbon budget, of which transport forms a large part, within 6 years from 2020.<sup>13</sup>***

Transport is also a major contributor to dangerous levels of air pollution.<sup>14</sup> Four out of one hundred deaths in the North West are estimated to be attributable to

poor air quality. A number of Local Authorities in the region have illegal levels of nitrogen dioxide and have been directed by government to look at measures to restrain traffic in order to achieve compliance.<sup>15</sup>

To bring transport carbon and air pollution emissions down requires an overhaul of the region's inefficient and polluting transport system. Some of the problems with the current system identified by the Green New Deal report include continued expansion of road and airport capacity and expensive and inefficient privatised rail and bus services.<sup>16</sup> As well as growing carbon emissions and high levels of toxic air pollution, this has led to social exclusion and inequality resulting from poor public transport services.

## 2.2 CONTINUED EXPANSION OF ROAD AND AIRPORT CAPACITY

To seriously address the climate emergency, there is first a need to stop building more roads and expanding airport capacity, which stimulate driving and flying and make it more difficult to achieve carbon budgets. Evidence collected over many years has shown that building roads increases traffic,<sup>17</sup> with significant carbon impacts. The FoE briefings estimate that planned expenditure on trunk road and motorway schemes between 2015 and 2025 may increase annual carbon emissions from these roads by 17% as a result of induced traffic and higher vehicle speeds.<sup>18</sup> A number of these schemes are in the North West: the Government's first Road Investment Strategy (RIS1, for 2015 to 2020), including £1.3-2.9 billion for 17 major road schemes in the North West.<sup>19</sup> There are also a number of major schemes planned in the North West post-2020.<sup>20</sup> While trunk road and motorway schemes are the responsibility of national government, transport bodies within the North West can and should seek to influence national decisions about these schemes.

There are also plans to increase capacity at the regional airports in Manchester and Liverpool.<sup>21</sup> As a result, aviation emissions are forecast to rise by as much as 85% by 2050.<sup>22</sup> This means aviation will consume a disproportionate amount of the remaining carbon budget, which unfairly penalises other sectors: higher aviation emissions will require deeper emissions cuts elsewhere. Radical reductions in aviation emissions in the region are needed over the next decade and beyond.<sup>23</sup> While this is outside the scope of Local Authorities in the North West and not considered further in this report, reducing demand for air travel will require increased taxation in the form of Air Passenger Duty (APD), or a Frequent Flyer Levy.<sup>24</sup> Unfortunately the government is going in the wrong direction by proposing reductions in APD for domestic flights.<sup>25</sup>

## 2.3 EXPENSIVE AND INEFFICIENT PRIVATISED RAIL AND BUS SERVICES

Deregulation lies at the core of the poor performance of local public transport networks in the UK.<sup>26</sup> After the bus network was deregulated in 1986, decisions about where and when to run services were made by individual bus operators, rather than local transport authorities, based primarily on criteria related to profitability rather than on environmental, social or public interest criteria. The UK is unique in Europe in having a deregulated system for its buses.<sup>27</sup>

Deregulation means that individual bus companies decide their own routes, timetables, tickets and standards, allowing them to cherry-pick the most profitable routes and drop less busy routes. This leaves many communities with limited or poor bus services. Austerity cuts to Local Authority budgets have made it impossible for the public sector to fill the gaps in services. As a result, there has been a large decline (20%) in bus journeys over the last decade in the North West, in all areas.

***In Greater Manchester bus patronage has declined from 350 million journeys a year in the mid-80s to just under 200 million today.<sup>28</sup>***

# 3. Characteristics of NW England

The priorities for transport interventions in the North West that would form part of a Green New Deal, need to be:

- Effective at significantly reducing carbon within the next ten years
- Within regional and local control
- Fair and equitable
- Provide other benefits such as cleaner air or improved health and wellbeing.

The primary need is to focus on reducing car mileage. Whether and how the priority interventions outlined in the next section can be applied requires two considerations: What is relevant at a regional scale; and what is specific about North West England.

## 3.1 WHAT IS RELEVANT AT A REGIONAL SCALE?

We need to consider the extent to which powers available to local government at regional and local scale allow for significant carbon-reducing interventions. For example, aviation policy and Low Emission Vehicle (LEV) subsidies are determined by national Government, whereas buses and active travel are largely regionally or locally determined. Similarly, the Strategic Road Network (SRN) (motorways and some A roads) is managed by Highways England, a national body, while Local Transport Authorities manage the local road network only.

Opportunities for change also depend on the powers and funding available to the transport bodies within the region. These range from:

- Mayoral Combined Authorities<sup>29</sup> with significant powers and funding through devolution deals.
- County Councils and Unitary Authorities<sup>30</sup> with overall responsibility for transport but limited funding and capacity.
- Lower tier authorities<sup>31</sup> and the Lake District National Park Authority with very limited powers and resources.
- Transport for the North (TfN) which provides strategic coordination for all the Transport Authorities across the North of England.<sup>32</sup> It has developed a Strategic Transport Plan which is effectively a prioritised investment strategy, and leads on the delivery of Smart Ticketing, Rail Franchising and trunk road and motorway construction in the region.
- Local Enterprise Partnerships (LEPs) are private sector-led partnerships between

businesses and local public sector bodies at sub-regional scale. Their focus on economic growth is backed by their ability to make a case for Local Growth Fund investment. Their focus is primarily on capital investment and infrastructure. Given these powers, their governance and transparency has recently been the focus of scrutiny.<sup>33</sup>

Annex 1 summarises powers and funding of local government in the North West.

## 3.2 WHAT IS SPECIFIC ABOUT THE NORTH WEST?

Different regions have their own characteristics with regard to mobility and transport, so what – if anything – is specific about North West England that might enable or restrict the potential for carbon reduction from transport? The North West has a population of 7.3 million<sup>34</sup> spread out over five main sub-regions (Cumbria; Lancashire; Greater Manchester City Region; Liverpool City Region; Cheshire & Warrington). One quarter of residents do not have access to a car or van.<sup>35</sup> About 58% of the population live in the predominantly urban Greater Manchester and Merseyside

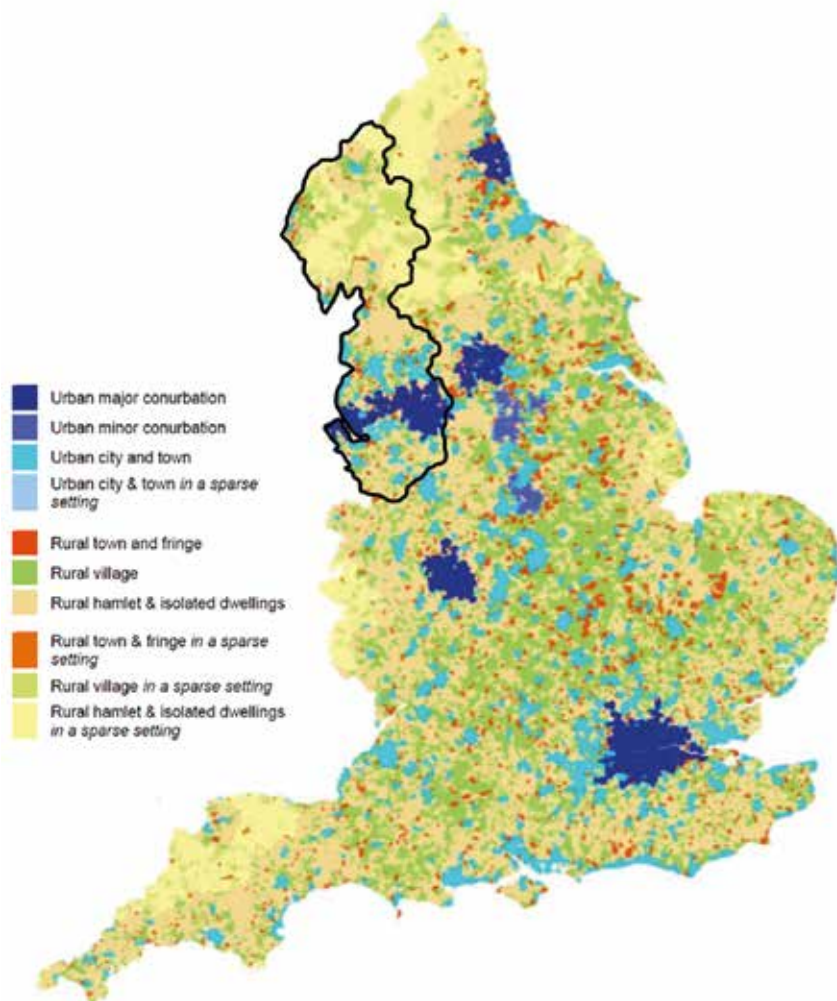


Figure 2: Distribution of place types in the North West<sup>37</sup>

conurbations, and only 7% of the population live in the largest – predominantly rural – county of Cumbria (Figure 2). Whilst there may be more opportunities for non-car travel in dense urban areas, people in these areas tend to own fewer cars and drive fewer miles in cars already.<sup>36</sup> The degree of rurality is a key determinant of miles driven and hence carbon emissions from transport.

Rural areas have also seen the highest growth in overall mileage. While vehicle mileage has increased in the North West by nearly a quarter since 1993, in urban hinterlands and rural areas (e.g. Knowsley, Tameside, Halton and Cumbria) mileage has increased by more than a third.<sup>38</sup> So, although the main focus of action to reduce carbon emissions is likely to be in urban areas, it is also necessary to understand opportunities in more rural areas as well.

The degree to which Local Authorities can control traffic also varies within the region. Around 40% of road

transport carbon emissions come from motorways overall but this varies from 23% in Liverpool City Region to 48% in Cheshire (Figure 3). The difference is even more pronounced by district. For example in Chorley (Lancashire), Warrington (Cheshire) and Eden (Cumbria) over 60% of road transport carbon emissions are from motorway traffic. Although motorways are not managed by Local Authorities, a significant proportion of motorway traffic will either start or end within the North West, and so can be influenced through local measures such as workplace parking levies and comprehensive bus services.

Some journey purposes offer greater opportunities for switching from car to another mode of transport. For instance, people are more open to experimenting with other modes (e.g. trying out an electric bike) when on holiday, and there are more institutional opportunities to influence how people travel for business or commuting.

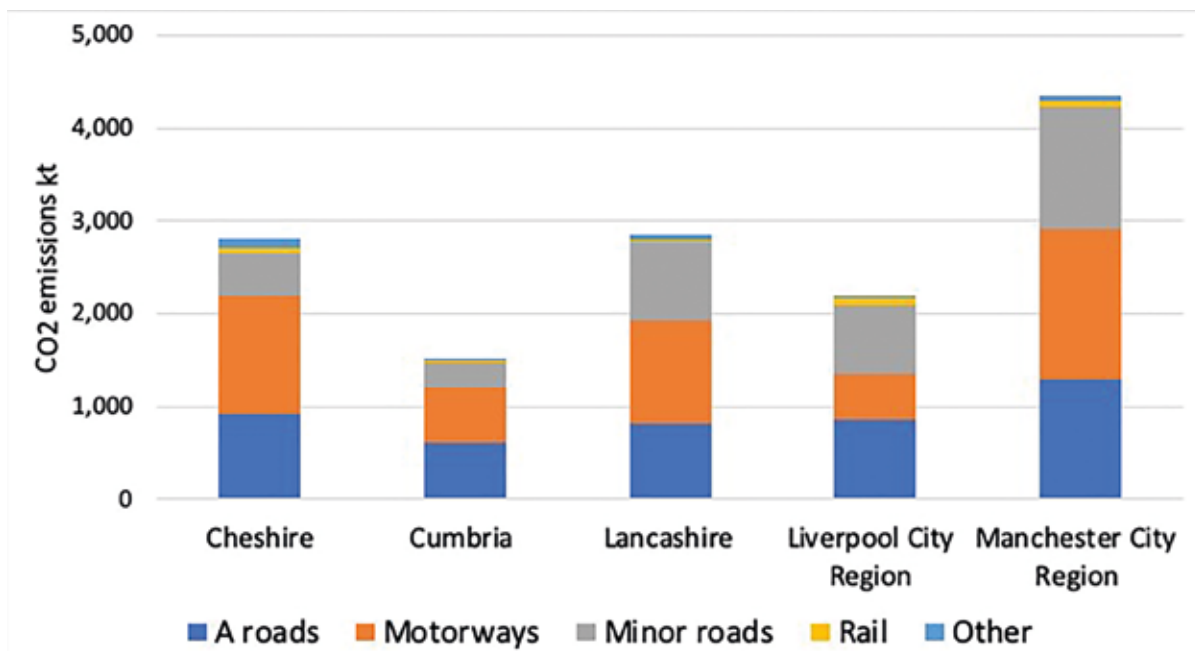


Figure 3: Domestic transport CO<sub>2</sub> emissions by area in 2017<sup>39</sup>



# 4. Priority Interventions

The FoE briefings set out a wide range of transport measures to address the climate emergency, summarised in Box 1. The priority interventions considered in this report are:

- Transform the local public transport system through reregulation
- Improve rail links and services
- Develop cycling and infrastructure for active travel
- Introduce traffic restraint measures such as road pricing combined with free fares for buses and trams, and re-allocate road (and parking) space
- Identify complementary measures that enable a shift to lower carbon lifestyles and places

**Universal and comprehensive public transport:** In places such as Munich, Vienna and Zurich, all modes of public transport function as a single system coordinated by a public transport governing body or Verkehrsverbund (VV). The VV oversees the planning, management and delivery of public transport services across an area 10-30 times bigger than the built-up area of the main city, covering its surrounding suburbs and villages. Most services are run by publicly-owned (municipal) transport companies. In the words of Munich VV, there is “one network, one timetable, one ticket” across all public transport modes and services. Per capita levels of public transport use in the VVs are 3-4 times the level of use in similar areas of England. To achieve similar levels of public transport use here, local bus and tram services will have to be brought under the control of local transport authorities through reregulation or franchising.

**Universal and comprehensive active travel:** To make our roads safe for walking and cycling we need to build a network of segregated cycleways, radiating out from urban areas into the surrounding suburbs and villages. Seville, in Spain, built 120km of segregated cycle paths in just four years, resulting in high mode shares (43%) for walking and cycling. In the Capital Region of Denmark, fast, direct, convenient cycle superhighways are being built over distances of 20-40 km from Copenhagen; 25% of users of these superhighways previously drove. Electric bikes (e-bikes) can widen the type of trip taken by bike, allowing longer and hillier trips; and can broaden the range of people who cycle, including older people and those with poor health or fitness. Around half of e-bike trips replace car trips, and longer journeys are feasible with e-bikes than with conventional bikes. In Europe e-bike sales have taken off, partly as a result of national, regional and local grants. Around one third of carbon emissions from driving in urban areas could be avoided if people were to switch to walking and cycling for all suitable trips. Electric cargo-bikes also offer the opportunity to replace up to 8% of the mileage in urban areas for service and delivery by vans, cars and lorries. Other changes needed to facilitate walking and cycling include 20mph speed limits on all built-up roads, effective enforcement of speed limits and road traffic law, cycle hubs at all main rail stations, and secure cycle parking at smaller rail stations.

**An Eco Levy on driving balanced by free local public transport:** A mileage-based Eco Levy on driving would encourage people to switch to greener modes of transport for some trips. Combining it with free local public transport could make it popular. Cities that have introduced road pricing show that it is effective in cutting carbon and air pollution: in central London, carbon emissions from traffic inside the charging zone fell by 16% four years after the introduction of congestion charging. Winning public support is key, but experience in London, Stockholm and elsewhere has shown that once people see the effect of road pricing, their support for it increases. This is helped by the fact that in practice there are many more winners than losers: in Stockholm 75% of the congestion charges paid by private vehicles came from just 5% of residents. Public support for an Eco Levy will be higher if it is linked to free local public transport. More than 100 towns and cities across the world have introduced free public transport. For example, Dunkerque in France made its buses free in autumn 2018 and at the same time transformed its bus network. One year on, bus trips are up 85%, half of new bus users previously drove, one in ten new bus users have sold their second car and there is evidence it is leading young people to postpone getting a driving licence, in a working class town that was culturally very attached to the car. Local councils already have the powers to introduce charging schemes for local roads, and once buses are regulated, they would be able to make bus travel fare-free.

**Box 1: A radical transport response to the climate emergency: summary of key interventions<sup>40</sup>**

## 4.1 TRANSFORM THE LOCAL PUBLIC TRANSPORT SYSTEM

### Bus Reregulation

To provide bus services that are good enough to attract a significant proportion of people's travel, and hence cut carbon emissions from driving, we need to reregulate them. This would enable Local Transport Authorities to set routes and frequencies, and to design a comprehensive service that operates seven days a week, from early in the morning till late at night, across all areas of the North West. The Local Transport Authority would specify what bus services it wanted and tender the delivery to operators who would compete on the price and quality of their bids. A regulated bus service would be stable from year to the next, without the frequent changes of timetables that make people feel they cannot trust their bus service. It would also make the financial case for new tram lines in Greater Manchester and elsewhere much stronger, because trams would not be running against commercial bus services on busy corridors.<sup>41</sup>

## 4.2 IMPROVE RAIL LINKS AND SERVICES

The North West's rail network should be at the core of a regional sustainable transport strategy. The network requires a combination of measures which include:

- Infrastructure investment to provide much-needed capacity, prioritising congested sections in the Manchester area and on the West Coast Main Line
- A rolling programme of electrification, aiming for a North West rail network that is fully electrified, or uses low emission technology on lesser-used routes
- Additional rolling stock to reduce overcrowding, extending the length of existing trains
- Selective re-opening of rail routes, prioritising those that enhance the network (as opposed to dead-end branches) and also benefit freight. Examples include Manchester – Sheffield via Woodhead, Skipton – Colne and (Manchester) – Chinley – Matlock – Derby.<sup>42</sup>

## 4.3 IMPROVE CYCLE NETWORKS AND E-BIKES

It is often assumed that walking and cycling can only substitute for short car trips (under 5 miles), which account for a high proportion (56%) of trips but a low proportion (14%) of car mileage. However research carried out for FoE, summarised in Box 1, and others, shows that the use of electric bikes (e-bikes), combined with an extensive network of segregated cycleways, opens up the potential for cycling to substitute for significantly more car mileage and thus carbon emissions.

## 4.4 TRAFFIC RESTRAINTS: ECO LEVY COMBINED WITH FREE FARES

Although we need to make public transport and cycling attractive and convenient options, these on their own are not enough to make the necessary reductions in car mileage. Even where a viable alternative to driving is available, many people still travel by car as a result of habit and social norms.

Driving can be discouraged by re-allocating space (highways and parking) from car use to other use or through pricing. The widespread development of bus and cycle networks will require these modes to take space from car use, and so there would be re-allocation. Any increases in road or parking capacity need to be halted immediately. Deliberate strategies for reductions would need to be implemented; this is effectively the infrastructure that Transport for London's Healthy Streets agenda will deliver, namely street space reallocated from cars to make "more attractive places to live, work, play and do business".<sup>43</sup>

Road pricing would need to be implemented not only in towns and cities but also outside urban areas. Research carried out for FoE summarised in Box 1 suggests that a pay per mile Eco Levy, with the explicit aim of cutting carbon and air pollution, could be a highly effective and fair means of reducing carbon emissions from transport. The biggest obstacle to an Eco Levy is winning public support. The FoE briefings suggest that combining a mileage based Eco-levy with free local public transport could make it a politically sellable policy, so that it becomes the norm wherever a good non-car option exists.<sup>44</sup>

Land-use planning also plays a large part in reducing the need for car travel and avoiding locking in high-carbon travel. Evidence shows that concentrating developments in urban areas, and planning compact, dense, diverse settlements with good access by walking, cycling and public transport are the key to reducing the distance travelled by car.<sup>45</sup> However, many new developments in the North West are being built in the wrong place, and are car-based, leading to urban sprawl.

Between 2012 and 2017 nearly half of new homes given planning permission in two regions of the North West, Blackburn and Warrington, were built outside the main built up areas or in Green Belt. Between a fifth and a third were not within easy walking or cycling distance (<2km) of a railway or metro station.<sup>46</sup> Local planning authorities in the region need to ensure that a diverse mix of dense, well designed new developments are built in existing urban areas (mainly on brownfield land) centred around high-quality public transport.<sup>47</sup> Planners in the region should be facilitating car-free developments, especially in areas of poor air quality.

## Complementary measures

There are a whole range of other interventions that complement those outlined above and so enable low carbon “mobility lifestyles” and make sure that low carbon mobility is locked-in to places. These include:

- Area-wide 20mph speed limits and interventions to calm traffic in sensitive areas such as schools
- Comprehensive implementation of road user hierarchies into transport and spatial planning
- The replacement of journeys through digital connectivity (and hence the imperative to make decent digital infrastructure and services a norm across the whole region)
- Information about transport and travel that is easy to use by all, relevant, accurate, live and openly available

Access to shared transport should be available across the whole region. This includes car clubs, ride sharing, shared taxis, demand-responsive minibus services, and public bike share or pool bike schemes. Implementation of such schemes would vary depending on the type of local context, but all provide local, on-demand access.

- Car clubs (pay-as-you-drive cars available locally) provide access to a car for journeys where there is no pragmatic alternative. As a complement to public transport, they provide flexibility and convenience for more of the trips which would previously have required ownership of a private car. Data show that car clubs help to reduce car mileage and increase walking and cycling, resulting in large carbon savings for members.<sup>48</sup> It is estimated that each car club member saves 191kg CO<sub>2</sub> per year.<sup>49</sup> Both Enterprise and Co-Wheels car clubs currently operate in both urban and rural areas in the North West.
- Ride sharing / car sharing, where two or more people use the same car to make the same journey or parts of the same journey, also has considerable potential to reduce carbon emissions.<sup>50</sup>
- Shared bikes include on-street, self-service public bike schemes, workplace pool bikes, or community bike libraries for loans of a weekend or more. Such schemes can help people cut their car trips and carbon significantly, with nearly four in ten (37%) bike share commuters using their car less.<sup>51</sup>

These come together through networks of mobility hubs – locations where transport services and information are co-located with other services in neighbourhoods and interchanges.<sup>52</sup>

New modes and models of shared transport are emerging such as e-scooters, smart on-demand flexibly routed shuttles and shared ownership among groups.

# 5. What would this look like in the North West?

This section takes the preceding considerations and considers how they would work in the North West as a whole as well as in specific types of areas:

- City Region: Greater Manchester and Merseyside
- City/town and related rural hinterlands: to demonstrate places beyond the conurbations – such as Blackpool and Preston
- A National Park: showing how rural areas with significant visitor travel may function.

## 5.1 THE NORTH WEST

### Improved rail services

The region’s rail network offers a sustainable means of connecting the City Regions, towns and more rural communities. The current system of rail franchising is not fit for purpose, as recognised by Sir Keith Williams in his review of rail franchising, commissioned by the Government in 2018.<sup>53</sup> Greater integration between infrastructure and train operations would make it easier to deliver major infrastructure upgrades and re-openings. There are strong arguments for moving to a system of mutual ownership, as advocated by the Rail Reform Group<sup>54</sup> or a renationalisation of the railways. These would ensure that any profits are recycled back into improving rail services, with accountability to passengers, communities and businesses in the North.

### Improved bus services

Without re-regulation of buses, the UK’s public transport can only be improved within the constraints of the current system, which is unlikely to deliver the required shift from car to bus use. As a result of the Bus Services Act 2017, Combined Authorities with directly elected

mayors (Greater Manchester and Liverpool City Region) now have similar powers to London to re-regulate bus services.<sup>55</sup> Other local transport authorities (County Councils and Unitary Councils) can seek special permission from the government to re-regulate buses.<sup>56</sup> This means that all areas in North West England have the opportunity to use the powers of the Bus Services Act.

Currently total annual public transport journeys per head in the North West range from a low of 22 in Cheshire East to 109 in Liverpool City Region and Blackpool (see Figure 4). With reregulation there is no reason why this could not be increased to levels comparable with the continental VVs (see Box 1), where per capita public transport trips are around 168-442 trips per year.<sup>57</sup> Other than Cumbria, gross population densities in the North West are similar to, or greater than, those in the VV areas.<sup>58</sup>

### Segregated cycleways and e-bikes

Based on the 2011 census about 54,000 commuters cycled to work in the North West.<sup>60</sup> If e-bikes were widely available and the North West had a similar cycling infrastructure and culture to the Dutch, modelling using the Propensity to Cycle Tool (PCT) suggests 25 - 30% of commuters would cycle to work, equivalent to over 820,000 people (see Table 1).<sup>61</sup> This could reduce an estimated 85 million car journeys per year.<sup>62</sup>

### Eco-Levy and free bus fares

The Transport Act 2000, as amended by the Local Transport Act 2008, provides for the introduction of road charging outside London if it helps to achieve policies in the authority’s local transport plan.<sup>64</sup> This means that all Local Transport Authorities within the North West have the powers to introduce some form of road pricing, such as an Eco Levy, or Workplace Parking Levy.

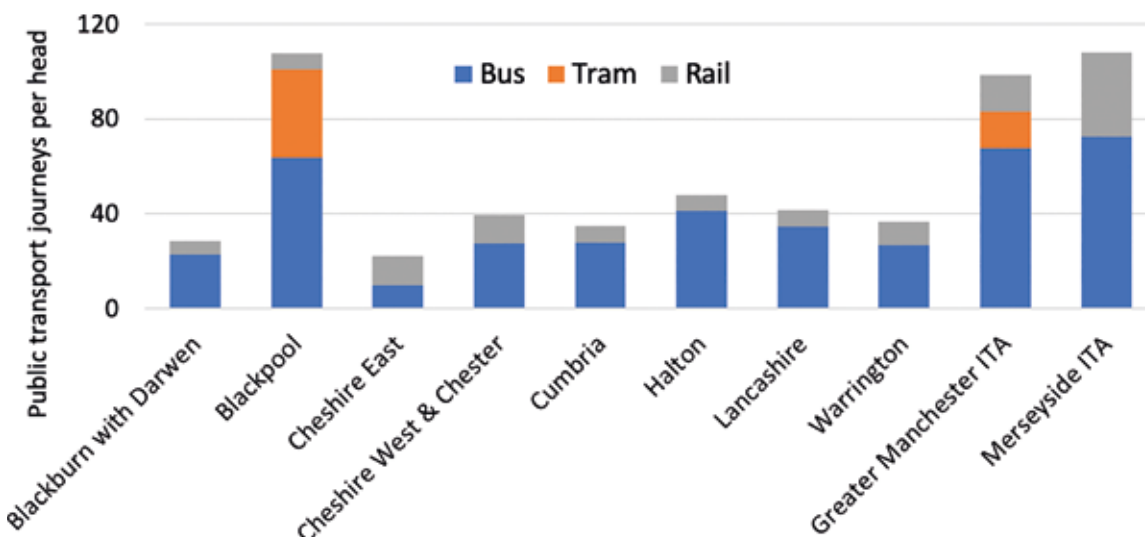


Figure 4: Public transport passenger journeys per head for Local Transport Authorities in the North West (2018/19 for bus and tram; 2017/18 for rail)<sup>59</sup>

AREA	NO. COMMUTERS	% CYCLING TO WORK IN E-BIKE AND GO DUTCH SCENARIO	NUMBERS CYCLING TO WORK IN E-BIKE AND GO DUTCH SCENARIO
Cumbria	212,993	25%	52,609
Cheshire	393,914	26%	100,842
Lancashire	605,587	27%	162,297
Liverpool City Region	612,177	30%	180,592
Manchester City Region	1,124,157	29%	323,757
North West	2,948,828		820,098

**Table 1: Predicted cycle commute rates in the North West with an e-bike/Go Dutch scenario<sup>63</sup>**

The procedure is quite straightforward: the charging authority makes an Order for a scheme, and there is no requirement to hold local referenda, to obtain approval from the Secretary of State, or even consult local people or representatives, though the latter is advisable.<sup>65</sup>

Under the Act, Local Transport Authorities would be able to ring-fence the revenue for public transport improvements.<sup>66</sup> This has been done in Nottingham following the introduction of a successful Workplace Parking Levy in 2012. This has raised £61 million to date, all of which has been spent on improving the city's transport infrastructure, including extension to the city's tram network, significant renovation of the main railway station and a new fleet of 45 electric buses.<sup>67</sup>

A number of Local Authorities in the North West are already looking at a more limited form of traffic restraint in the form of Clean Air Zones (CAZ)<sup>68</sup> for improving air quality.<sup>69</sup> A CAZ is now under consideration in Greater Manchester,<sup>70</sup> Sefton<sup>71</sup> and Warrington<sup>72</sup> although Liverpool City Council appears to have rejected a chargeable CAZ as an option.<sup>73</sup>

While a CAZ can help reduce air pollution in congestion hotspots, they will do little to address carbon, as the majority of mileage is outside urban centres. A pay per mile Eco Levy, adjusted by vehicle type and area, would be a fairer and more effective way to tackle carbon, air pollution and congestion simultaneously. This could be varied by vehicle and road type for optimal reductions in carbon, air pollution and congestion.

Up-front investment in public transport would be a pre-requisite, and public support for this measure could be increased by linking this to free public transport. Reregulation of bus services, coupled with powers to establish municipal bus companies, so that

all profits were reinvested, would make it possible and affordable to provide free bus services.

Even more achievable would be extending free public transport from older people to other groups like young people.

### Complementary measures

There is a need for region-wide digital connectivity, cross-modal integrated ticketing and transport and travel information. Car clubs, bike share and ride sharing services would be available across the region with appropriate types of services in the variety of types of areas. Road user hierarchies and speed limits would be applied appropriately in different contexts.

## 5.2 CITY REGIONS

### Improved rail services

The rail network offers opportunities to improve travel both within and between City Regions. Whilst Merseyrail has a successful local rail network, controlled locally by Merseytravel, Greater Manchester's rail network has suffered as a result of problems with infrastructure and rail franchises that are not fit for purpose. Greater Manchester's Metrolink tram system is, however, a success story and further extensions to reach parts of the City Region not currently served would be welcome.

The key problem facing the City Region's rail network is lack of capacity,<sup>76</sup> particularly the section of line between Deansgate Junction and Manchester Piccadilly.<sup>77</sup> Delays caused by this congested section impact not only on Greater Manchester's rail network, but the entire region. Lack of infrastructure capacity is compounded by insufficient rolling stock resulting in overcrowding.

***It is estimated that bus services could be made entirely free for everyone in the North West with an extra £0.3 billion per year.<sup>74</sup> For comparison, we spend about £10 billion nationally per year on roads (about £0.38bn in the North West) which are free at the point of use.<sup>75</sup>***

Extending the length of existing trains, rather than putting more trains on already congested routes, should be the top priority, combined with a deliverable plan to upgrade infrastructure. Routes which are currently diesel-operated should be shifted to lower carbon power sources, either via electrification or other more innovative fuels.

### Improved bus services

If Greater Manchester and Liverpool City Regions franchised their buses this would make it possible to provide coordinated, comprehensive bus and tram networks, with simple integrated ticketing, for over 4 million people, over half (55%) of the population in the North West. This is estimated to reduce car use by at least 2.1 billion km or 10% of the car mileage in these two City Regions.<sup>78</sup>

**Greater Manchester Combined Authority (GMCA)** is set to become the first City Region outside London to reregulate its buses. An assessment into the region's bus services has been completed and a public consultation on the plans ended in January 2020.<sup>79</sup> Currently there are over 40 different bus operators with 160 different types of tickets, with limited or no coverage in some areas, and fares are sometimes more expensive than taxis.<sup>80</sup> By contrast, in regulated London the bus network covers the entire city with a 24-hour service, and bus fares all cost £1.50 no matter how far you go, or £4.50 maximum for a day of bus-only travel on multiple operators.<sup>81</sup>

There would be similar benefits to passengers in Greater Manchester under a franchised system. Currently a typical route, such as the 5.5 km trip between Pendlebury and the city centre, has seven services by three operators with prices ranging from £1.40 - £4.20 for the same trip, and with low frequencies on Sundays and evenings.<sup>82</sup> Under a franchised system there would be one ticket valid on all services, set at the lowest fare level, and bus frequency would be more evenly spaced and increased, particularly in off-peak hours. GMCA would also provide comprehensive (and real time) information about bus services as well as ticketing through a single website and app.

There would be wider benefits for the city in terms of reduced congestion, carbon and air pollution, with a forecast shift from car to bus use. This is estimated to deliver £344 million in direct benefits to the city, with a benefit-to-cost ratio of over three.<sup>83</sup> GMCA have identified a number of funding sources that would cover the additional up-front funding needed but after the first 5 years it is forecast to generate a surplus for the City Region.<sup>84</sup> The economic benefits of the proposed franchising scheme to passengers are around four times those of alternative reforms considered, such as partnership arrangements.

**Liverpool Combined Authority** has also launched the process to review bus franchising<sup>85</sup> and is being urged to follow Manchester's lead.<sup>86</sup> Responses to a consultation identified punctuality, reliability, ticketing complexity, the overall cost of travel and service frequencies, coverage and hours of operation as key themes for

improvement. The CA is expected to recommend the preferred option in early 2020. The proposed franchising scheme would allow for 24-hour buses on key routes, at least one bus an hour on all routes between 5am and midnight, and zero emission fleets.<sup>87</sup>

### Segregated cycleways and e-bikes

Table 1 suggests that the potential for cycling to work is greatest in the two City Regions, with a third of commuters cycling under a scenario of e-bikes combined with Dutch-style infrastructure. Greater Manchester has already embarked on a 10-year £1.5 billion 'Bee Network' programme to deliver a network of 1,800 miles of Dutch-style cycle and walk routes across the City Region.<sup>88</sup> This transformative programme includes upgraded crossings and junctions and nearly 130 miles of new segregated cycling and walking routes. The total spend on cycling and walking in Greater Manchester is around £15 per head per year, levels similar to those of Amsterdam and Copenhagen. To apply similar levels of investment in Liverpool City Region would cost around £23 million a year.

## 5.3 CITIES, TOWNS AND RURAL HINTERLANDS

### Improved rail services

Improvements made to the City Region rail network will have positive impacts in other parts of the North West. Beyond the City Regions, and away from the West Coast Main Line, many routes remain diesel-operated. A rolling programme of electrification is needed, which would bring operational as well as environmental benefits. Some smaller communities such as Skelmersdale or Keswick which are not served by the rail network (though may have been at one time) could be better connected through co-ordinated rail-link bus services which connect to rail at hub stations. In some cases, there is a good argument for re-opening railways.<sup>89</sup> In a small number of cases, e.g. Preston, developing a light rail network could be viable.

### Improved bus services

To reregulate buses outside the City Regions, the County Councils<sup>90</sup> and Unitary Councils in the North West must seek special permission from the Government and secondary legislation is required. Although providing the evidence required by law will be more challenging for these smaller authorities than for the better-funded City Regions, they may be able to make a combined bid to the Government with the support of Transport for the North (TfN). TfN's transport strategy already contains a commitment to set a carbon reduction pathway that is compatible with national targets for carbon reduction.<sup>91</sup> It is therefore in TfN's interest to facilitate bus franchising for member authorities to meet carbon targets, particularly as binding transport carbon budgets at regional and local level may be introduced in future years.

The service levels in areas in the VVs of Switzerland (see Box 1) can provide some idea of what bus

franchising might look like in comparable areas in the North West. For example, the public transport coordinating body in the canton of Zurich has the following service standards, which are enshrined in law:

- Settlements >300 people – hourly service
- Corridors where multiple settlements give strong demand – service every 30 minutes
- Large dense settlements – services at least every 15 minutes
- Services run 6am to midnight, seven days a week
- Buses and trains connect
- Services repeat hourly at regular intervals on a ‘clock-face timetable’.<sup>92</sup>

**Blackpool** also offers an example of how a municipally owned bus and tram service,<sup>93</sup> which is operated for the public good rather than for profit, can increase public transport patronage. Since deregulation the trams and buses have been operated by an arms-length council company. While the bus services have suffered from local competition, the tram, which was upgraded with government funding to light rail in 2012, has reversed a steady decline into rapid and sustained growth.<sup>94</sup> Tram journeys per head last year were over three times higher than the year before the upgrade.<sup>95</sup> Per capita public transport journeys in Blackpool are now higher than in Greater Manchester (Figure 4).

### Segregated cycleways and e-bikes

Dutch-style improvements in cycle infrastructure combined with e-bikes would also transform levels of cycling outside the main urban centres. For example cycling to work rates in Lancashire, based on the 2011 census, are generally less than 1%, with higher rates in the urban centres of Lancaster, Preston, and the Fylde towns, and lower rates in the more rural and hillier areas.<sup>96</sup> In a ‘Go Dutch’ scenario, Preston, Lancaster and the Fylde towns are estimated to have very high potential – in some



**Figure 5: Route network based on a ‘Go Dutch’ scenario in Preston<sup>99</sup>**

cases more than a third of commute trips would be by bike, similar to the City Regions.<sup>97</sup> With e-bikes, which allow for longer and hillier trips, cycling commute levels increase substantially in the more sparsely populated, hillier rural areas of the county, to over 10% in all areas.<sup>98</sup>

When desire lines for the routes between where people live and work are mapped onto the fastest routes, these provide a comprehensive route network, shown in Figure 5 for Preston in a ‘Go Dutch’ scenario.

While there is an existing orbital scenic route in Preston, the Guild Wheel, this is unlikely to be widely used for commuting, as key commuter desire lines are radial rather than orbital.<sup>100</sup> Providing a more comprehensive network above would increase route directness and maximise commuter cycling uptake. Extending the cycle network further would enable people to cycle for longer journeys, increasing the carbon savings. If a Cycle Superhighway network on the same scale as Copenhagen was built in Preston it would extend as far as Blackpool in the west and Blackburn in the east.

### Shared transport

The existing network of pay-as-you-go low emission car club vehicles would be spread across towns, villages and rail stations that serve local settlements. These would allow journeys to be made by local people when appropriate, as well as more complicated onward journeys into the region to be linked to approach by rail. On-street public bike share would allow for local journeys to be made in larger settlements.<sup>101</sup> Other models providing access to bikes, such as managed loans and long term rentals, may be more appropriate in more rural areas and for commuters. Ride sharing would allow for low emission journeys to be made where public transport alternatives are not practicable. This works well for regular journeys such as commuting, and social network-linked participants to events – such as races or shows.

## 5.4 THE LAKE DISTRICT NATIONAL PARK

### Improved rail services

It is one of the ironies of the 1960s rail closures that National Parks were particularly badly affected. The Lake District lost the important through-route from Penrith via Keswick to Whitehaven and Workington, and the branch to Coniston was closed. The Settle-Carlisle line was saved thanks to a strong campaign. A sensible policy for the LDNP should be based on:

- Making more of what is already there. The Lake Line (Oxenholme to Windermere) provides access from the West Coast Main Line to the heart of the Lake District, though its integration and reliability is poor. The Furness and Cumbrian Coast Lines provide stunning scenery as well as ways of accessing the south and west of the Park, though rolling stock is of poor quality and services are limited, especially at weekends.

- Much better links to/from stations, including buses & shuttles fully integrated with the rail service, dedicated cycle lanes to stations, car clubs vehicles, e-bike rental and baggage forwarding being the norm at gateway stations.
- Rail re-openings in some cases, e.g. Penrith – Keswick. However, linked to wider policies of car restraint, developing a comprehensive light rail network in the Lake District, using very low emission technology, should be seriously considered as the best long-term solution. For example, the existing Oxenholme – Windermere railway could be converted to light rail and extended through the heart of the Lake District through Ambleside and on to Keswick/Penrith.

### Improved bus services

For the National Parks there needs to be progressive new governance to help transform transport services, as proposed by the 2018 Glover review for Defra.<sup>102</sup> The main arguments for this are that National Parks are coherent rural areas with well understood travel patterns and users. The Lake District currently welcomes over 15 million visitors per year, and when people are visitors it is recognised that they are far more open to different behaviours compared to their day-to-day lives. This is supported by the 14% shift in visitor trips within the Lake District from car between 2011-2014 as a result of a package of targeted funding for sustainable transport.<sup>103</sup>

With new transport powers the Lake District should be able to design transport services that serve its agreed strategy of approaches-gateways-corridors-hubs.<sup>104</sup> A comprehensive bus network would integrate local demand-responsive services with shuttles to gateways and express services along corridors. Park-wide networks of pay-as-you-go Electric Vehicles, e-quadracycles/trikes/bikes could be integrated with the bus services through comprehensive smart ticket systems. The restriction of car access to parts of the Park already being considered will become the norm, especially in peak visitor season by 2030. This will all become part of the marketing of the Lake District’s visitor experience. Whilst the system may be designed primarily for visitors, it will provide greatly improved transport services for residents as well.

### Segregated cycleways and e-bikes

E-bike sales by Lake District bike shops is booming across different types of users. E-bike rental for visitors has been piloted (2011-2014; 2018) and there are plans for the Lake District to be the first “e-bikes-everywhere” National Park through a comprehensive distributed rental system. This plan is designed to make the most of the off-road and quiet-road networks that have been developed in the last decade.

The potential for e-bike use more broadly has been shown by a study conducted by researchers at the University of Leeds. This looks at the capability for e-bikes by estimating how far people could travel by e-bike each day for each area in England.<sup>105</sup> This goes beyond commuter travel, also considering leisure and shopping, and takes account of the physical fitness of the individuals living in each area and hilliness. This is then compared to how far people drive in each area and used to estimate how much each person could reduce their car use with an e-bike.<sup>106</sup> Figure 6 shows the maximum number of current car km travelled that residents are physically capable of replacing with an e-bike. There are several parts of the LDNP where around 8,000 km of car travel per person per year is replaceable by e-bikes (equivalent to around 14 miles a day). This translates into potential carbon savings of 1.2 tonnes per resident in those areas, or an average of 970 kg across the LDNP. This research shows that Lake District residents are capable of larger CO<sub>2</sub> savings from e-bikes than people living in large cities. This does not include the potential of visitors who could also reduce their carbon travel emissions associated with travelling around the Lakes by car.



**Figure 6: Annual car km potentially replaceable by e-bike trips for residents of the Lake District<sup>107</sup>**



# 6. Added value to health, society and economy

A more sustainable transport system in the North West will deliver many benefits in addition to tackling the climate emergency.

## **New jobs**

The shift to a zero carbon transport system focused on public transport has the potential to create an estimated 37,000 jobs in the North West. This includes 24,000 new jobs in the driving and maintenance of buses and 13,000 new jobs in the operation and maintenance of railways.<sup>108</sup>

## **Thriving local economies**

Higher density developments that are better connected to public transport will increase the diversity of activities in urban areas, making them more attractive places to live and work. The economic productivity of our towns and cities will increase. High street retail will benefit from increased weekday footfall, while less space for parking and roads will enable the creation of more public and green spaces.

## **Better air quality**

Poor air quality is responsible for around 40,000 early deaths a year in the UK, and road traffic is the main source of air pollution.<sup>109</sup> In Manchester, the North West's most polluted city, emergency hospital admissions for asthma are more than twice the national average.<sup>110</sup> Fewer cars on the road will reduce dangerous pollutants emitted from exhaust fumes, tyres and brake pads.

## **Active travel, healthier people**

Cars encourage sedentary lifestyles and related health issues such as obesity and diabetes. A modal shift

to active travel will have major benefits in preventing avoidable NHS demand and improving health outcomes. Shifting less than 2% of car miles to walking and cycling has been estimated to provide health benefits worth over £2.5 billion per year in 2030.<sup>111</sup>

## **Quieter and safer neighbourhoods**

Re-prioritising road space towards walking and cycling has the added benefit of creating safer roads and neighbourhoods where children can play. Less traffic at lower speeds (<20mph) would also reduce noise, and electric vehicles are much quieter than petrol and diesel vehicles.

## **Happier drivers**

Less traffic would mean fewer delays from congestion for essential road users. Nearly half of motorists find driving stressful, and more than half would like to reduce their car use, but feel constrained by the lack of alternative ways to meet their transport needs.<sup>112</sup> According to an RAC survey, the majority of drivers would swap to public transport if the services were better.<sup>113</sup>

## **A fairer society**

Low income households, female heads of house, black and minority ethnic (BME) and disabled people are much less likely to have access to a car, meaning they are more dependent on public transport to get around.<sup>114</sup> Research in northern cities has also found that unaffordable and unreliable public transport is severely limiting access to job opportunities in low income neighbourhoods.<sup>115</sup> More accessible and affordable public transport will therefore reduce social exclusion and poverty in our communities.

*"The evidence is compelling: The transformation of our transport sector in the North West is essential to meet the demands of the climate crisis.*

*"More importantly, the details highlighted in this report demonstrate that a sustainable and fairer travel network is possible and achievable. Local Authorities, indeed all those responsible at a sub-national level for climate plans, transport, health and economic development must ensure that the transformation of the transport system is at the heart of their future plans."*

Gina Dowding MEP

# Annexe 1: Local Government powers and funding in North West England

The Department for Transport is responsible for national transport policy and provides grant funding for Local Transport Authorities. Highways England are responsible for the strategic road network (Motorways and Trunk Roads). Network Rail is responsible for rail infrastructure, major stations and timetabling.

TIER		SCOPE OF POWERS	FUNDING
<b>Pan-regional</b>	Transport for the North	Strategic coordination of Upper Tier (Transport) Authorities across the North of England into Strategic Transport Plan – effectively a prioritised investment strategy.  Leads on the delivery of Smart Ticketing, Rail Franchising and Strategic road construction	Via constituent Transport Authorities
<b>Regional</b>	Note that there is no transport specific body for any of England's regions outside London		
<b>Upper Tier: Combined Authorities (City Regions) &amp; Transport Authorities</b>	Combined (Greater Manchester/ Transport for Greater Manchester; Merseyside/ Merseytravel)  Transport: Cumbria, Lancashire	Responsibilities:  Planning rail services, bus routes & services Concessional Travel  Development & management of PT & active travel schemes,  information & marketing, infrastructure.  Maintenance of local highways; planning for local highway schemes.  Air quality & carbon emissions  CAs have pooled responsibility of constituent Lower Tier Authorities.	£100s millions  Council tax, DfT grants (Statutory duties), DfT & other grants (projects), self-generated revenue, can raise finance for capital investment
<b>Local Enterprise Partnerships</b>	Cheshire & Warrington Greater Manchester Liverpool City Region Lancashire Cumbria	Not statutory bodies: the partnerships (of businesses and local authorities) agree investment priorities	Via (Government) Local Growth Fund plus local implementation of funding from Regional Growth, Growing Places and Growth Hub funds. Advise on local investment from European Structural & Investment Fund.  £10s - £100s millions

<b>Unitary Authorities</b> <b>(Combine Upper &amp; Lower Tier responsibilities)</b>	Blackpool Blackburn & Darwen Cheshire East Cheshire West & Chester Warrington		
<b>Lower Tier: District &amp; Borough Councils</b>	Within TfGM: Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan  Within Merseytravel: Knowsley, St Helens, Sefton, Wirral, Liverpool, Halton (Unitary)  Other: Allerdale, Barrow-in-Furness, Burnley, Carlisle, Chorley, Copeland, Eden, Fylde, Hyndburn, Lancaster, Pendle, Preston, Ribble Valley, Rossendale, South Lakeland, South Ribble, West Lancashire, Wyre	Broad local responsibilities (e.g. housing, waste etc)  Responsibilities that relate to transport and travel include:  Car parking & pavements  Air quality & carbon emissions  Health & wellbeing  Spatial planning	£millions - £10s millions  Central government grants, Council tax, Business rates, Self-generated revenue (parking, Planning gain etc). Can raise finance for capital investment.  Various hypothecated government grants including relating to Health & Wellbeing
<b>National Park Authorities</b>	Lake District Yorkshire Dales	Transport-related policy is often linked to spatial planning (statutory duty), often focuses on visitor travel, and with respect to environment & landscape protection, public access, local & visitor economy and community vibrancy.  Delegated responsibility for Rights of Way, often including off-road cycle routes	Block Grant (DEFRA); Grant funding (e.g. EU, HLF, Government); Self-generated revenue.  c. £10m
<b>Parish &amp; Town Councils</b>	Often covering villages & rural areas and small towns,	Advisory to Planning Authority, including on local rights of way & footways; maintenance of local public facilities (parks, WCs etc).  Sometimes take a lead in community-based sustainable transport planning, public realm and walking & cycling <sup>116</sup> provision and promotion.	Often <25k p.a. as precept from Council Tax; grant funding for specific initiatives.

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- 6 In 2017 the North West region produced 39.4 Mt CO<sub>2</sub> of which transport was 13.7MT i.e. 35%. Both nationally and regionally CO<sub>2</sub> emissions from road transport have been rising since 2013. Department for Business, Energy and Industrial Strategy (2019a) UK local authority and regional carbon dioxide emissions national statistics. [www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics](http://www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics)
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- 9 3.2 Mt from Manchester and 0.2 Mt from Liverpool. Table 69, Carbon emissions by airport in Department for Transport (2017) UK aviation forecasts. October 2017. [www.gov.uk/government/publications/uk-aviation-forecasts-2017](http://www.gov.uk/government/publications/uk-aviation-forecasts-2017)
- 10 Road, rail and other transport emissions from Department for Business, Energy and Industrial Strategy (2019a) Department for Business, Energy and Industrial Strategy (2019a) Ibid; aviation emissions from Department for Transport (2017) Ibid.
- 11 The Tyndall Centre for Climate Research have developed carbon budgets for the 39 district and unitary authorities in the North West in order for them to make a 'fair' contribution to the Paris Climate Agreement and reach zero or near zero between 2040-2048. Note these budgets are for energy only so exclude land-use emissions, as well as international aviation and shipping. The budgets are not broken down by sector but are equivalent to an annual 10-14% reduction depending on Local Authority. The Tyndall Carbon Budget Tool. Website, accessed 15/01/20. <https://carbonbudget.manchester.ac.uk/reports>
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- 23 Hopkinson L. and Sloman L. (2019a). A net zero carbon budget for the whole transport sector. Briefing for FoE. June 2019. <https://policy.friendsoftheearth.uk/insight/net-zero-carbon-budget-whole-transport-sector>
- 24 A Frequent Flyer Levy could help address the disproportionate impact from wealthy individuals who fly very frequently. The levy would be zero for the first return flight and increase progressively for each subsequent flight in each year (for example, one possible scenario is £20 for the second flight, £60 for the third, reaching £420 by the ninth flight A Free Ride website, accessed 20/01/20. <http://afreeride.org>
- 25 At the time this report was written the government was considering a potential cut in air passenger duty (APD) on domestic flights to help Flybe, which operates more than half of UK internal flights outside London. BBC (2020) Flybe: UK government considers new funding for airline. BBC News article 14/01/20. [www.bbc.co.uk/news/business-51100029](http://www.bbc.co.uk/news/business-51100029)
- 26 Sloman L. and Hopkinson L. (2019b) Ibid.
- 27 The only places in the UK where bus services remain regulated are London and Northern Ireland. Transport for London oversees buses, the Underground, Overground and Docklands light rail as a single system. In Northern Ireland, state-owned company Translink runs buses and trains. Sloman L. and Hopkinson L. (2019b) Ibid.
- 28 Greater Manchester Combined Authority (2019) Mayor sets out major transport overhaul Web article, accessed 20/01/20. [www.greatermanchester-ca.gov.uk/news/mayor-sets-out-major-transport-overhaul](http://www.greatermanchester-ca.gov.uk/news/mayor-sets-out-major-transport-overhaul)
- 29 Manchester and Liverpool City Regions
- 30 Lancashire and Cumbria County Councils; Blackpool and Blackburn with Darwen Unitary Councils
- 31 District and Borough Councils, plus town and parish councils
- 32 Transport for the North (TfN) is the first and, so far, only statutory Sub-National Transport Body, established in 2018 under the Cities and Local Government Devolution Act 2016. It is a partnership between the North's 20 local transport authorities and business leaders together with Network Rail, Highways England, and HS2 Ltd, that works with Central Government. <https://transportforthenorth.com>
- 33 National Audit Office (2019) Local Enterprise Partnerships: an update on progress. May 2019. [www.nao.org.uk/report/local-enterprise-partnerships-an-update](http://www.nao.org.uk/report/local-enterprise-partnerships-an-update)
- 34 North West England's 7.3m residents represent about 13% of England's population. ONS (2018) Census Output Area population estimates – North West, England. [www.ons.gov.uk/peoplepopulationandcommunity/](http://www.ons.gov.uk/peoplepopulationandcommunity/)

[populationandmigration/populationestimates/datasets/censusoutputareastimatesinthenorthwestregionofengland](#)

**35** About 78% of adults have driving licences; 76% households have access to a car or van, though this ranges from 66% in urban conurbations through to 93% in sparser rural areas with few other transport options. National Travel Survey 2018

**36** For example residents of rural districts did on average 891 trips and 9,109 miles per year compared to residents of metropolitan built up areas who did on average 792 trips and 5,287 miles per year. National Travel Survey (2018) [www.gov.uk/government/statistics/national-travel-survey-2018](http://www.gov.uk/government/statistics/national-travel-survey-2018)

**37** Office for National Statistics (2017) The 2011 Rural-Urban Classification for Output Areas in England, <https://data.gov.uk/dataset/2d893949-ef4b-4311-965d-0ffe06f32f65/rural-urban-classification-2011-of-output-areas-in-england-and-wales>

**38** In only one area (Blackpool) has road mileage decreased. Department for Transport (2019) Road Traffic Statistics. Table TRA8902: Car vehicle traffic (vehicle miles) by local authority in Great Britain, annual from 1993. [www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra](http://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra)

**39** Department for Business, Energy and Industrial Strategy (2019a) UK local authority and regional carbon dioxide emissions national statistics. [www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics](http://www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics)

**40** Sloman L. and Hopkinson L. (2019a) Ibid.

**41** Sloman L. and Hopkinson L. (2019b) Ibid.

**42** Campaign for Better Transport. Reopening rail lines. Website, accessed 20/01/20. <https://bettertransport.org.uk/re-opening-rail-lines#nw>

**43** Transport for London. Healthy Streets website. Accessed 20/01/20. <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets>

**44** Sloman L. and Hopkinson L. (2019a) Ibid.

**45** Hopkinson L. and Sloman S. (2019b) Planning for less car use. Briefing for Friends of the Earth. February 2019. <https://policy.friendsoftheearth.uk/insight/planning-less-car-use>

**46** A study for the Royal Town Planning Institute (RTPI) looked at planning permissions granted between 2012-2015 in twelve English city regions, including two in the North West: Blackburn region (comprising Blackburn with Darwen; Hyndburn; Ribbles Valley; and Burnley) and Warrington region (comprising Warrington; St. Helens; Wigan; Halton; Cheshire West and Chester). In Blackburn 45% of planning permissions were outside the built-up area or in Green Belt and 22% were more than 2 km from a railway station. In Warrington 47% of planning permissions were outside the built-up area or in Green Belt and 33% were more than 2 km from a railway station. Bilfinger GVA (2016) The Location of Development. Report for RTPI. <https://www.rtpi.org.uk/media/1747858/LocationofDevelopment.pdf>

**47** Sloman L. and Hopkinson L. (2019b) Ibid.

**48** Long term members decrease their annual household mileage by 793 miles per year and increase walking and cycling much more than the national averages. Coupled with the fact that a large and growing proportion (36%) of the car club fleet is hybrid or electric, means there are large carbon savings associated with car club membership. CoMoUK England and Wales Annual Survey 2017/8 <https://como.org.uk/wp-content/uploads/2019/06/EW-report-v4.0.pdf>

**49** Based on the mileage savings of long term members of 793 miles per year (1276 km/y) and the average car emissions of 149.6g/km. <https://como.org.uk/wp-content/uploads/2019/06/EW-report-v4.0.pdf> However in some cases, when additional private car mileage is added in, car club members can have higher overall mileage emissions than the national average.

**50** For example, with an estimated 38 million empty seats on the roads each day, filling these seats via car sharing that would take 12 million cars off the road (Liftshare & Census data 2011); this scales to about 5.9 million cars of the north west's roads per day.

**51** CoMo's annual survey of bike share users showed that 26% of respondents said they had begun cycling after a gap of 1 year or more, and a further 20% hadn't ridden a bicycle for between 1 and 4 years. Well over half (63%) reported an increase in the number of cycling trips after joining a scheme, with 40% stating that they are cycling more often and a further 23% indicating that they are cycling "much more often." A sizeable proportion (17%) of bike share commuters previously travelled by car or taxi and they also changed the amount they use their car, with 37% said they were using their car less. CoMoUK bike share survey 2019 <https://como.org.uk/wp-content/uploads/2019/11/CoMoUKBikeShareSurvey-2019-final-1.pdf>

**52** Mobility hubs create space designed specifically to house public and shared mobility modes and improve the public realm for local residents and businesses

as well as travellers. <https://como.org.uk/shared-mobility/co-mobility-themes/mobilityhubs>

**53** A root and branch review of Britain's railway, independently chaired by Keith Williams was launched in September 2018. [www.gov.uk/government/collections/the-williams-rail-review](http://www.gov.uk/government/collections/the-williams-rail-review) In a series of papers published since Williams has been clear that franchising cannot continue in the way it is today, as it's no longer delivering clear benefits for either taxpayers or farepayers. Butcher L. (2019) The Williams Review: The future of rail? Article for the House of Commons Library. <https://commonslibrary.parliament.uk/insights/the-williams-review-the-future-of-rail>

**54** Rail Reform Group (2019) A Railway of the North, For the North. <https://www.yorkshirepost.co.uk/news/opinion/columnists/paul-salveson-bring-back-the-lancashire-and-yorkshire-railway-and-let-s-have-one-service-for-the-north-1-9564258>

**55** Bus Services Act 2017. [www.legislation.gov.uk/ukpga/2017/21/contents/enacted](http://www.legislation.gov.uk/ukpga/2017/21/contents/enacted)

**56** According to government guidance on the Bus Services Act, franchising powers are only available automatically to Mayoral Combined Authorities. Other types of authorities can request franchising powers for which secondary legislation is necessary. In addition these other types of authorities need the consent of the Secretary of State before they can begin to use the new powers. They will need to demonstrate, amongst other things, their capability to deliver, as well as their track record in delivering transport improvements and plans to make a difference for passengers. Department for Transport (2017) The Bus Services Act 2017. New powers and opportunities. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/664318/bus-services-act-2017-new-powers-and-opportunities.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664318/bus-services-act-2017-new-powers-and-opportunities.pdf)

**57** Hamburg, Munich, Rhine-Ruhr, Vienna, Zurich and Berlin-Brandenburg, as reported by Buehler R., Pucher J. and Dümmler O. (2018) Verkehrsverbund: the evolution and spread of fully integrated regional public transport in Germany, Austria and Switzerland. International Journal of Sustainable Transportation.

**58** The case study VV areas typically include a large suburban and rural hinterland, covering land areas of 2000-9000km<sup>2</sup> or more, resulting in gross population densities of about 200-1000 people per km<sup>2</sup>. Sloman L. and Hopkinson L. (2019) Transforming Public Transport. Briefing for Friends of the Earth. February 2019. <https://policy.friendsoftheearth.uk/insight/transforming-public-transport> The gross population densities in the North West range from 74 people per km<sup>2</sup> (Cumbria), 325 (East Cheshire), 360 (Cheshire West and Chester), 483 (Lancashire), 567 (Halton), >1,000 (Blackburn with Darwen), 1,070 (Warrington) 3,889 (Liverpool City Region), 3,977 (Blackpool), Manchester City Region (4,716).

**59** Department for Transport (2019) Table Bus 0110: Passenger journeys on local bus services per head of population by local authority: England [www.gov.uk/government/statistical-data-sets/bus01-local-bus-passenger-journeys](http://www.gov.uk/government/statistical-data-sets/bus01-local-bus-passenger-journeys); National Statistics. Light rail and tram statistics, England: year ending March 2019. [www.gov.uk/government/statistics/light-rail-and-tram-statistics-england-year-ending-march-2019](http://www.gov.uk/government/statistics/light-rail-and-tram-statistics-england-year-ending-march-2019); Office of Rail and Road. Station usage 2017-18 data. <https://dataportal.orr.gov.uk/statistics/usage/estimates-of-station-usage>

**60** Department for Transport (2013) Cycling to work (at local authority level) (CW090). [www.gov.uk/government/statistical-data-sets/cw090-cycling-to-work-at-local-authority-level](http://www.gov.uk/government/statistical-data-sets/cw090-cycling-to-work-at-local-authority-level)

**61** Based on 2011 Census statistics of number of commuters and method of travel, and the Propensity to Cycle tool. [www.pct.bike](http://www.pct.bike) Lovelace R. et al (2017) The Propensity to Cycle Tool: An open source online system for sustainable transport planning. J. Transport and Land Use, vol. 10, No. 1. [www.jtlu.org/index.php/jtlu/article/view/862](http://www.jtlu.org/index.php/jtlu/article/view/862)

**62** Assuming a net increase of 766,137 commuters cycling to work, 25% of these commuters previously drove, and 444 commute journeys per year (222 days per year, 2 journeys per day).

**63** Propensity to Cycle tool. [www.pct.bike](http://www.pct.bike) Lovelace R. et al (2017) Ibid.

**64** Part III and Schedule 12 of the Transport Act 2000, as amended by the Local Transport Act 2008, provide for the introduction of road charging outside London. Charging schemes may only be made "if it appears desirable for the purpose of directly or indirectly facilitating the achievement of policies in the charging authority's local transport plan". Transport Act 2000. [www.legislation.gov.uk/ukpga/2000/38/part/III](http://www.legislation.gov.uk/ukpga/2000/38/part/III)

**65** Butcher L. (2013) Local Road Charges. House of Commons Library Briefing Paper Number SN01171, 14 March 2018. <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01171>

**66** The requirements of the Act set out that any proceeds must be spent for the purpose of directly or indirectly facilitating the achievement of the local transport policies of the authority. Butcher L. (2013) Ibid.

**67** In 2012 Nottingham City Council pioneered a Workplace Parking Levy, where

employers are required to licence any workplace parking place and are charged if they have 11 or more parking places for staff (excluding blue badge places). Nottingham City Council. Workplace Parking Levy website. <https://www.nottinghamcity.gov.uk/wpl>, accessed 15/01/20.

**68** Defra and Department for Transport (2017) Clean Air Zone Framework. Principles for setting up Clean Air Zones in England. May 2017. [www.gov.uk/government/publications/air-quality-clean-air-zone-framework-for-england](http://www.gov.uk/government/publications/air-quality-clean-air-zone-framework-for-england)

**69** Manchester City; Salford Metropolitan; Stockport Metropolitan; Trafford Metropolitan; and Liverpool City. ClientEarth (2019) What do ClientEarth's legal cases mean for local authority plans to deliver nitrogen dioxide compliance in England and Wales? ClientEarth Briefing, May 2019. [www.documents.clientearth.org/wp-content/uploads/library/2019-03-15-what-do-clientearths-legal-cases-mean-for-local-authority-plans-to-deliver-nitrogen-dioxide-compliance-in-england-and-wales-ce-en.pdf](http://www.documents.clientearth.org/wp-content/uploads/library/2019-03-15-what-do-clientearths-legal-cases-mean-for-local-authority-plans-to-deliver-nitrogen-dioxide-compliance-in-england-and-wales-ce-en.pdf)

**70** Greater Manchester are proposing the introduction of a CAZ across the whole of Greater Manchester in two phases from 2021 and 2023, although this excludes cars. The most polluting vehicles would pay a daily penalty to enter and/or travel within the Clean Air Zone. Greater Manchester Clean Air Plan proposals website. Accessed 15/01/20. <https://cleanairgm.com/clean-air-plan>

**71** Sefton Council website. Accessed 15/01/20. [www.sefton.gov.uk/environmental-protection/air-quality.aspx](http://www.sefton.gov.uk/environmental-protection/air-quality.aspx)

**72** Air Quality News (2018) Warrington keeps Clean Air Zone on the table as plan goes live. May 2018. <https://airqualitynews.com/2018/05/01/warrington-keeps-clean-air-zone-on-the-table-as-plan-goes-live>

**73** Liverpool City Council. Liverpool's Clean Air Plan. Website, accessed 15/01/20. <https://liverpool.gov.uk/council/strategies-plans-and-policies/environment-and-planning/liverpools-clean-air-plan>

**74** It is estimated that free buses would be possible for everyone in England outside London with an extra £1.8 billion per year. Sloman L. and Hopkinson L. (2019) Transforming transport funding to meet our carbon targets. Briefing for Friends of the Earth. November 2019. <https://policy.friendsoftheearth.uk/insight/transforming-transport-funding-meet-our-climate-targets> This is equivalent to about £0.3 billion for the North West based on relative population figures.

**75** This estimate of £10 billion per year includes average National Roads Fund expenditure of £4.8 billion per year (based on published figure of £28.8 billion over 6 years); assumed £0.3 billion per year from HIF (based on extrapolation of proportion allocated to road schemes so far); assumed £0.35 billion per year from NPIF; and assumed expenditure on local roads of £4.1 billion per year (based on historic expenditure on local roads of £20.6 billion between 2013/14 and 2017/18, recorded in government accounts). This gives a total of £9.6 billion per year. Sloman L. and Hopkinson L. (2019) Transforming transport funding to meet our carbon targets. Briefing for Friends of the Earth. November 2019. <https://policy.friendsoftheearth.uk/insight/transforming-transport-funding-meet-our-climate-targets>

**76** Campaign for Better Transport (2019) The case for expanding the rail network <https://bettertransport.org.uk/reopenings>

**77** Manchester Picadilly – Oxford Road was the 4th most overcrowded peak train location in England & Wales in 2017. Department for Transport (2017) Top 10 overcrowded train services: England and Wales, spring and autumn 2017.

**78** Estimates courtesy of Lynn Sloman's workings for the FoE briefing: Sloman L. and Hopkinson L. (2019) Transforming transport funding to meet our carbon targets. Ibid.

**79** Consultation ended 08/01/20. Greater Manchester Combined Authority. Doing Buses Differently – proposed franchising scheme for Greater Manchester. [www.gmconsult.org/strategy-team/gmbusconsultation](http://www.gmconsult.org/strategy-team/gmbusconsultation)

**80** Greater Manchester Combined Authority (2019a) Bus Franchising in Greater Manchester Assessment. Bus Market in Greater Manchester Supporting Paper, September 2019. <https://greatermanchester-ca.gov.uk/media/2391/02-bus-market-in-greater-manchester-supporting-paper-web.pdf>

**81** Visit London website, accessed 15/01/20. [www.visitlondon.com/traveller-information/getting-around-london/london-bus](http://www.visitlondon.com/traveller-information/getting-around-london/london-bus)

**82** Greater Manchester Combined Authority (2019a) Ibid.

**83** Greater Manchester Combined Authority (2019b) Doing Buses Differently. Have your say on how your buses are run. Consultation document. <https://greatermanchester-ca.gov.uk/media/2451/greater-manchester-bus-franchising-consultation-document.pdf>

**84** It is estimated to require additional funding of £122 million over a 5-year transition period, and an additional 57 staff (FTE) to oversee and manage the franchise. Funding sources identified to cover this include local authorities of Greater Manchester who currently provide bus services funding through a statutory contribution to the Mayor of £86.7m per annum; the GM Mayor's budget and Central Government through the

Bus Services Operator Grant. Greater Manchester Combined Authority (2019b) Ibid.

**85** The formal process to review options, including franchising, was launched in September 2018. Liverpool City Region. Liverpool City Region Bus Reform on Combined Authority Agenda. Website, accessed 20/01/20. <https://www.liverpoolcityregion-ca.gov.uk/liverpool-city-region-bus-reform-on-combined-authority-agenda>

**86** Thorp L. and Houghton T. (2019) Liverpool could get new London-style bus network meaning more reliable transport for commuters. Article on BusinessLive website, 13/11/19. [www.business-live.co.uk/economic-development/liverpool-could-getting-new-london-17250091](http://www.business-live.co.uk/economic-development/liverpool-could-getting-new-london-17250091)

**87** Liverpool City Region Bus Reform on Combined Authority Agenda. Website, accessed 20/01/20. <https://www.liverpoolcityregion-ca.gov.uk/liverpool-city-region-bus-reform-on-combined-authority-agenda>

**88** Bee Network map. Website, accessed 20/01/20. <https://mappinggm.org.uk/bee-network>

**89** Campaign for Better Transport (2019) The case for expanding the rail network <https://bettertransport.org.uk/reopenings>

**90** Including unitary authorities: Blackburn with Darwen, Blackpool, Cheshire East, Cheshire West and Chester, Halton and Warrington; and County Councils: Cumbria and Lancashire.

**91** The STP recognises the need for transport to meet the emission reductions for the current 4th and 5th carbon budgets and "acknowledges that total national carbon reduction levels may need to be even deeper, according to recent advice from the CCC." Transport for the North (2019) Strategic Transport Plan, Final Draft. <https://transportforthenorth.com/wp-content/uploads/final-draft-strategic-transport-plan.pdf>

**92** Sloman L. and Hopkinson L. (2019) A radical transport response to the climate emergency. Briefing for Friends of the Earth. October 2019. <https://policy.friendsoftheearth.uk/insight/radical-transport-response-climate-emergency>

**93** Blackpool Transport Services Ltd (BTS) is a bus and tram operator running within the boroughs of Blackpool and Fylde and into the surrounding area, including Fleetwood, Lytham St Annes, Poulton-le-Fylde and Cleveleys. It is owned by Blackpool Borough Council. Blackpool Transport website, accessed 20/01/20. [www.blackpooltransport.com/about-us](http://www.blackpooltransport.com/about-us)

**94** Blackpool Transport website, *ibid*.

**95** Passenger journeys per head on Blackpool Tramway were 11.3 in 2010/11 and 37.4 in 2018/19. Department for Transport (2019) Table LRT0109 Passenger journeys per head on light rail and trams by system1: England - annual from 2004/05. [www.gov.uk/government/statistical-data-sets/light-rail-and-tram-statistics-lrt](http://www.gov.uk/government/statistical-data-sets/light-rail-and-tram-statistics-lrt)

**96** Department for Transport (2013) Cycling to work (at local authority level) (CW090) <https://www.gov.uk/government/statistical-data-sets/cw090-cycling-to-work-at-local-authority-level>

**97** Aldred R. (undated) PCT Case Study: Going Dutch in Preston. [https://cdn.rawgit.com/npc/pct-shiny/master/regions\\_www/www/static/03b\\_case\\_studies/preston-case-study.pdf](https://cdn.rawgit.com/npc/pct-shiny/master/regions_www/www/static/03b_case_studies/preston-case-study.pdf)

**98** Aldred R. (undated) *Ibid*.

**99** Aldred R. (undated) *Ibid*

**100** Aldred R. (undated) *Ibid*

**101** Different models are appropriate to different local contexts, but all provide zero carbon options for short to medium distance local journeys. <https://como.org.uk/shared-mobility/shared-bikes/what>

**102** Julian Glover was commissioned by DEFRA to undertake a wide-ranging review of the purposes and future of England's National Parks. It outlined not only inward-looking issues but also the potential role of National Parks as exemplars in various areas as they welcome about 100m visitors per year. Proposal 19 is for the Lake District National Park Authority to be given powers over transport services. Defra (2018) Landscapes review: National Parks and AONBs. [www.gov.uk/government/publications/designated-landscapes-national-parks-and-aonbs-2018-review](http://www.gov.uk/government/publications/designated-landscapes-national-parks-and-aonbs-2018-review)

**103** This is based on carefully controlled surveys of segment-by-segment travel of both day and staying visitors in 2011 and 2014. Cumbria Tourism (2016) Local Sustainable Transport Fund: Visitor Travel Case Study. <https://www.gov.uk/government/publications/lstf-evaluation-visitor-travel-and-sustainable-transport>

**104** The LDNPA has developed a movement strategy as part of its Management Plan, with a Vision for Sustainable Travel 2018-2040. Lake District National Park Authority. Caring for. Website, accessed 20/01/20. [www.lakedistrict.gov.uk/caringfor/smarter-travel](http://www.lakedistrict.gov.uk/caringfor/smarter-travel)

**105** The authors are grateful to Dr Ian Philips, Research Fellow at the Institute for

Transport Studies, University of Leeds, for sharing his unpublished research with us on the capability of travelling by e-bike in England.

**106** This is an average for all the people in each area and it is also an indicator of what people could do in terms of physical capability rather than what people currently want to do. There will be some people who can go further and some who cannot travel so far. The calculations assume that people could travel in a morning and in an evening whilst doing something else during the day time. The only naïve assumption is that the roads are safe to cycle on. Philips, I. (2020) Pers. Comm. By email 09/01/20.

**107** With kind permission of Dr I. Philips. Institute for Transport Studies, University of Leeds. This research forms part of an ESRC-funded "innovation fellowship" ES/S001743/1

**108** Green European Foundation (2018) Unlocking the Job Potential of Zero Carbon <https://gef.eu/publication/unlocking-the-potential-of-zero-carbon>

**109** Royal College of Physicians (2016) Every breath we take: the lifelong impact of air pollution <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

**110** IPPR (2018) Atmosphere: Towards a proper strategy for tackling Greater Manchester's air pollution crisis <https://www.ippr.org/research/publications/atmosphere>

**111** Ricardo-AEA (2013) Review of the impacts of carbon budget measures on human health and the environment. Report by Ricardo-AEA for the Committee on Climate Change. July 2013. <https://www.theccc.org.uk/wp-content/uploads/2013/12/AEA-Review-of-the-impacts-of-carbon-budget-measures-on-human-health-and-the-environment.pdf>

**112** Dudleston A. et al. (2005) Public Perceptions of Travel Awareness – Phase 3 Report for the Scottish Executive <https://www2.gov.scot/Publications/2005/08/0193550/35595>

**113** RAC (2018) 6 in 10 drivers would switch to public transport. News item, 20 September 2018. <https://www.rac.co.uk/drive/news/motoring-news/6-in-10-drivers-would-switch-to-public-transport>

**114** Government Office for Science (2019) Inequalities in Mobility and Access in the UK Transport System [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/784685/future\\_of\\_mobility\\_access.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784685/future_of_mobility_access.pdf)

**115** Joseph Rowntree Foundation (2018) Families in the North locked out of jobs market by 'unaffordable and unreliable' local transport <https://www.jrf.org.uk/press/families-north-locked-out-jobs-market>

**116** For example, Staveley, Cumbria. Staveley with Ings Parish Council website, accessed 20/01/20. [www.staveleywithingspc.co.uk/parish\\_plan\\_actions\\_traffic-light-update-nov\\_2014](http://www.staveleywithingspc.co.uk/parish_plan_actions_traffic-light-update-nov_2014)



Gina Dowding MEP

[www.ginadowding.org.uk](http://www.ginadowding.org.uk)