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Report for the Bicycle Association:  
The economic benefits of local cycling investment  
Greater London Case Study

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## Summary

There has never been a better time to invest in cycling in London and elsewhere. Providing better and safer conditions for cycling helps to encourage more people to cycle. As the levels of cycling increase, so too does the demand for bicycles, their accessories and related services, generating significant economic benefits for the London economy and new green jobs. This increase in cycling, in turn, will help to avoid a car-led recovery from the pandemic. To meet the Mayor's carbon targets by 2030 and the goal for 80% of all trips to be made by walking, cycling or public transport by 2041, there needs to be a significant increase in cycling levels.

**Cycling in London:** In the year to November 2020 an average of 14% of London adults cycled at least once a week, equivalent to an additional 90,000 adults in London compared to before the pandemic. There have also been significant observed increases in cycle flows, distance cycled on London roads and hires of Santander cycles. However, the cycle trip mode share (percentage of all trips that are cycled) is still only around 2%. There are also large differences in cycling between boroughs, with Inner London boroughs tending to have higher cycling levels than Outer London, so the health benefits of cycling are unequally distributed.

**The London bicycle economy:** Using the Bicycle Association's new Market Data Service (MDS) which provides data on the sales of cycling products and services, we can show for the first time the relationship between the level of cycling in a London borough and sales of cycling products and services. With record sales in 2020, the MDS shows the total retail value of cycling products and services sold in London was nearly £160 million. More than half of this value was from new bikes with nearly one in forty of the London population buying a new bike in 2020. Added to this is an estimated £160 million turnover from bikes and cycling products manufactured or wholesaled in London. Based on this additional data we have estimated the Gross Value Added (GVA – the value of goods minus their cost of production) for bicycle manufacture and sales of cycling products and services in London was **over £90 million** in 2020.

**The wider economic benefits:** cycling in London provides numerous health benefits and cuts carbon emissions, pollution and congestion. We estimate the 2020 levels of cycling in London help avoid around 270 premature deaths, nearly 1,900 serious illnesses, around 216 million vehicle kilometres driven and thousands of tonnes of greenhouse gas and air pollutant emissions per year. These wider health, environmental and productivity benefits, combined with the direct value of cycling products and services and estimates of cycle tourism, contribute around **£1.3-£1.4 billion per year** to the London economy. We also estimate there were **around 6,000-8,000 jobs** associated with cycling in London in 2020. Around half of these are generated by the manufacture and retail of cycling products and services.

**Investment in cycling encourages more cycling:** there is good evidence at a scheme, district and city level that investment in quality cycle infrastructure increases levels of cycling.

**Increasing cycling is necessary to meet the Mayor's carbon targets:** there needs to be a significant reduction in motor vehicle mileage over the next ten years in order for London to become net zero by 2030. This means a significant shift to zero carbon forms of travel such as cycling. The potential for further growth in cycling in London is substantial with an estimated 3.1 million car driver trips a day potentially cycleable. If these were converted into *actual* cycle trips, this could result in an estimated cycle mode share of 14% and taking account of forecast population growth, a six-fold increase in cycling trips by 2030. Although this sounds ambitious more than eighty world cities already achieve this cycling mode share (including UK cities) and rapid increases in cycling have been demonstrated in

the UK and elsewhere. This switch to cycling is available to Londoners of all backgrounds and ages, with a large majority of adults, including disabled people, saying they can cycle.

**Increasing cycling yields large economic benefits:** a six-fold increase in cycling by 2030 could result in wider health, environmental and productivity economic benefits of the order of £4.6 billion in 2030. The sales (volume and value) of cycling products and services and bike production are also likely to experience significant growth, particularly with expected large growth in e-bike sales. With evidence that turnover for bike retail increases with bike mode share, it is estimated that an increase in bike mode share to 14% by 2030 could increase the GVA from bike retail and manufacturing in London to around £240 million per year. This would make the total economic benefits from cycling in London **around £4.8 billion in 2030.**

**Additional green jobs:** A six-fold increase in cycling is estimated to create **over 25,000 additional cycling related jobs** (on top of the existing 6,000-8,000 jobs) by 2030. These would form a significant proportion (8%) of the 317,000 green jobs that the Mayor hopes to create over the next ten years. Not only can these be created quickly, providing an early win for the Mayor, many of these will be provided by small businesses and local retailers helping regenerate high streets in all areas of London. With a varied range of jobs and skills, cycling jobs can be effectively targeted to areas and groups where jobs are most needed.

**Additional measures needed:** To reap these economic and employment benefits there will need to be sufficient investment in cycling infrastructure and programmes over the next ten years as well as additional restrictions on road traffic to make cycling safer. While the final strategy to achieve the net zero target is up to the Mayor it is likely to require a combination of sticks and carrots. Set against the substantial multi-year benefits from increased cycling levels, cycling investment represents extremely good value for money.

The Bicycle Association hope to use the work to develop this case study as a template to use in other areas around the UK. This will help demonstrate the value of investing in cycling across the UK to local economies and the potential for green jobs. Using London as a first case study makes sense as London still has much to do to achieve its carbon targets and much to gain from increasing cycling levels.

Investing in cycling in London makes sense for national government as well as for London. The geography and demographics of London give it high cycling potential, which means that every pound invested in London achieves a bigger impact than if invested elsewhere. This means that investing in London will help national government to reach its target to double cycling nationally. London, with other leading cities, can also act as a model for others to follow.

## 1. Introduction

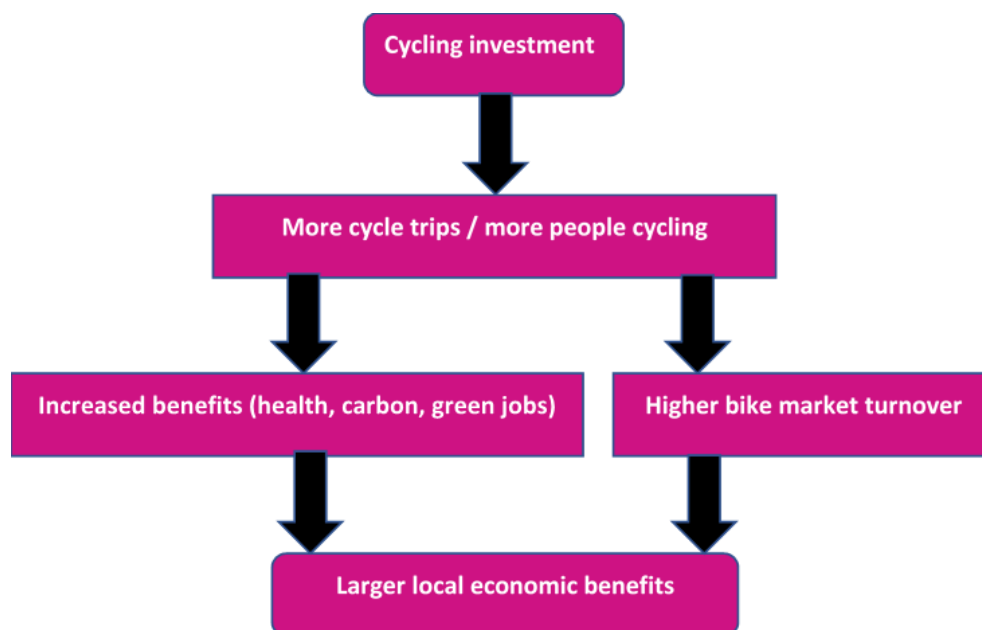
This paper examines the economic benefits of investment in cycling, using London as a case study. It draws on comprehensive new data collected by the Bicycle Association on the 'bicycle economy' – that is, sales of bicycles and cycling equipment, cycle maintenance and other cycle services recorded through the tills of cycle shops in London – which is disaggregated to the local borough level. It also assesses how many jobs in London are currently created by the bicycle economy.

The paper also seeks to quantify the wider economic benefits to London of current levels of cycling, due to improved health, savings to the NHS, gains in productivity and congestion relief.

Finally, it considers what level of cycling is necessary in future, if we are to achieve the London Mayor's commitment for London to be a zero carbon city by 2030, and quantifies what economic benefits, and how many jobs, this would deliver.

Providing better and safer conditions for cycling helps to encourage more people to cycle. As the amount of cycling increases, the demand for bicycles, their accessories and related services will also increase. This in turn helps create jobs, provides health benefits and cuts carbon emissions, pollution and congestion, as shown in Figure 1 below.

**Figure 1: Links between cycling investment, cycling trips and local economic benefits**



Despite Transport for London's (TfL) severe funding constraints as a result of the loss of fare income during the Covid-19 pandemic, there has never been a better time to invest in cycling in London. Cycling investment contributes to three key public policy priorities:

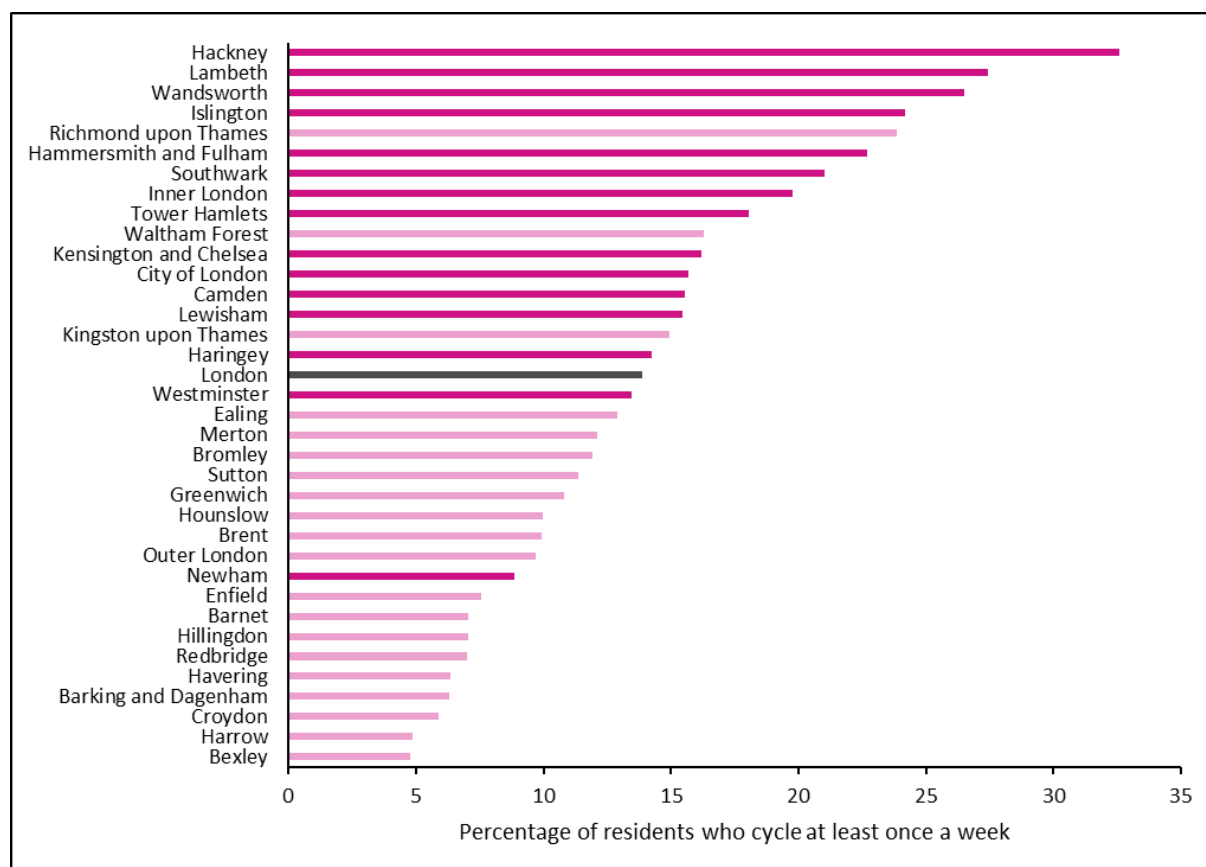
- It improves public health by increasing physical activity thus boosting immunity and reducing susceptibility to chronic health conditions and reduced absence from work.
- It is central to our ability to tackle climate change by reducing transport carbon emissions and will enable London to avoid, as far as possible, a car-led recovery from the pandemic.
- Per pound invested, it is one of the most effective forms of infrastructure investment for creating good jobs.

## 2. Levels of cycling in London

In the year November 2019–November 2020 (which covers the Covid-19 pandemic), an average of 14% of London adults cycled at least once a week for any purpose (including cycling for travel and cycling for leisure). This was an increase of 1% from the previous year equivalent to an increase in 90,000 people cycling at least once a week. Figure 2 shows that levels of cycling are generally higher in Inner London (20%) than Outer London (10%), but there are also socio-economic effects: for example, one of the highest cycling levels is in an Outer London borough, Richmond upon Thames (24%), presumably because of the high proportion of residents with higher income levels<sup>1</sup>. Some of the lowest levels of cycling are in Outer London boroughs with high levels of poverty: Barking and Dagenham (6%) and Barnet (7%). This means that the health benefits of cycling are very unequally distributed.

Two other ways of measuring how cycling varies by borough are shown in Appendix A. Figure A.1 shows that in the same period around 9% of London adults cycled at least once a week for travel (e.g. commuting or shopping). Figure A.2 shows that over a three-year period to 2019/20, the cycle mode share in different boroughs ranged from 1% to 9%, with an average across London of 2.4% of trips made by bicycle.

**Figure 2: Percentage of adult residents who cycled once a week by borough in Greater London in 2019/20** (outer London Boroughs in light pink)<sup>2</sup>



<sup>1</sup> Office for National Statistics (2020) [Earnings and hours worked, place of residence by local authority](#): ASHE Table 8.1a. Average weekly earnings in 2019 were much higher than the Inner London average in Richmond upon Thames and much lower than the Outer London average in Barking and Dagenham and Barnet.

<sup>2</sup> Department for Transport (2020). [Walking and Cycling Statistics](#). Table CW0302: Proportion of adults that cycle, by frequency, purpose and local authority, England, 2019–20.

### 3. Effect of the pandemic on cycling in London

Cycling in London, as in many other parts of the country, increased during the pandemic. As well as the number of cycling trips increasing, the number of cycling stages<sup>3</sup> in London in 2020 reached a record 316 million, up from 183 million the previous year.

Despite overall journey numbers being significantly reduced due to lockdown restrictions, Transport for London (TfL) have recorded the following:

- Increases of cycling in Outer London of 22% and 7% in inner London in Autumn 2020 compared to the previous year<sup>4</sup>.
- A more than 200% increase in cycle flows in the last two weekends of February 2021 compared to 2020<sup>5</sup>.
- Record numbers of hires of Santander cycles in 2021<sup>6</sup>.

The distance cycled on roads in London also increased by nearly 50% between 2019 and 2020<sup>7</sup>. This does not include the significant distance cycled on off-road routes.

### 4. The bicycle economy in London

In 2020 the Bicycle Association launched its Market Data Service (MDS) which can provide data on the sales of cycling products and services at a local and regional level back to January 2018<sup>8</sup>. This paper draws on the MDS sales data from calendar year 2020. MDS allocates sales to the bike shop where the sale was made, and this data can be aggregated to the local authority (i.e. London borough) level. We used data for an average of seven bike shops per London borough (ranging from four to fourteen shops per borough).

Sales of bikes in any individual London borough will depend on both the amount of demand (i.e. how many cyclists live in or near that borough) and the supply (i.e. number and size of bike shops in the borough). A close correlation between sales and cycling levels is unlikely as residents of one borough may travel to a neighbouring borough to buy a bike. Nevertheless, in broad terms we might expect that areas where more people cycle will tend to have more or bigger bike shops, and that those shops will make more sales. This pattern might be more likely for 'regular' bikes, but perhaps less the case for high-value bikes and specialist bikes (e.g. E-bikes and folding bikes) for which buyers might be more prepared to travel further to a specialist shop.

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<sup>3</sup> A cycling stage is where someone cycles as part of an overall trip. A cycling trip is defined where cycling is the main mode in terms of distance. DfT (2021) [Walking and Cycling Statistics](#). Table CW0403: Total stages cycled, with 3 year average, England, 2005 to 2020

<sup>4</sup> Transport for London (2021) [Outer London sees 22 per cent rise in cycling as new data shows vital role in active travel](#). Press release, 27/01/21

<sup>5</sup> Mayor of London (2021) [Record-breaking growth in London's cycle network continues](#). Press release, 10/03/21.

<sup>6</sup> Transport for London (2021) [Santander Cycles celebrates its eleventh birthday with record hires](#). Press release 30/07/21.

<sup>7</sup> Department for Transport (2020) [Road Traffic Statistics](#). Table TRA0413. Pedal cycle traffic (vehicle kilometres) by region and country in Great Britain, annual from 1993.

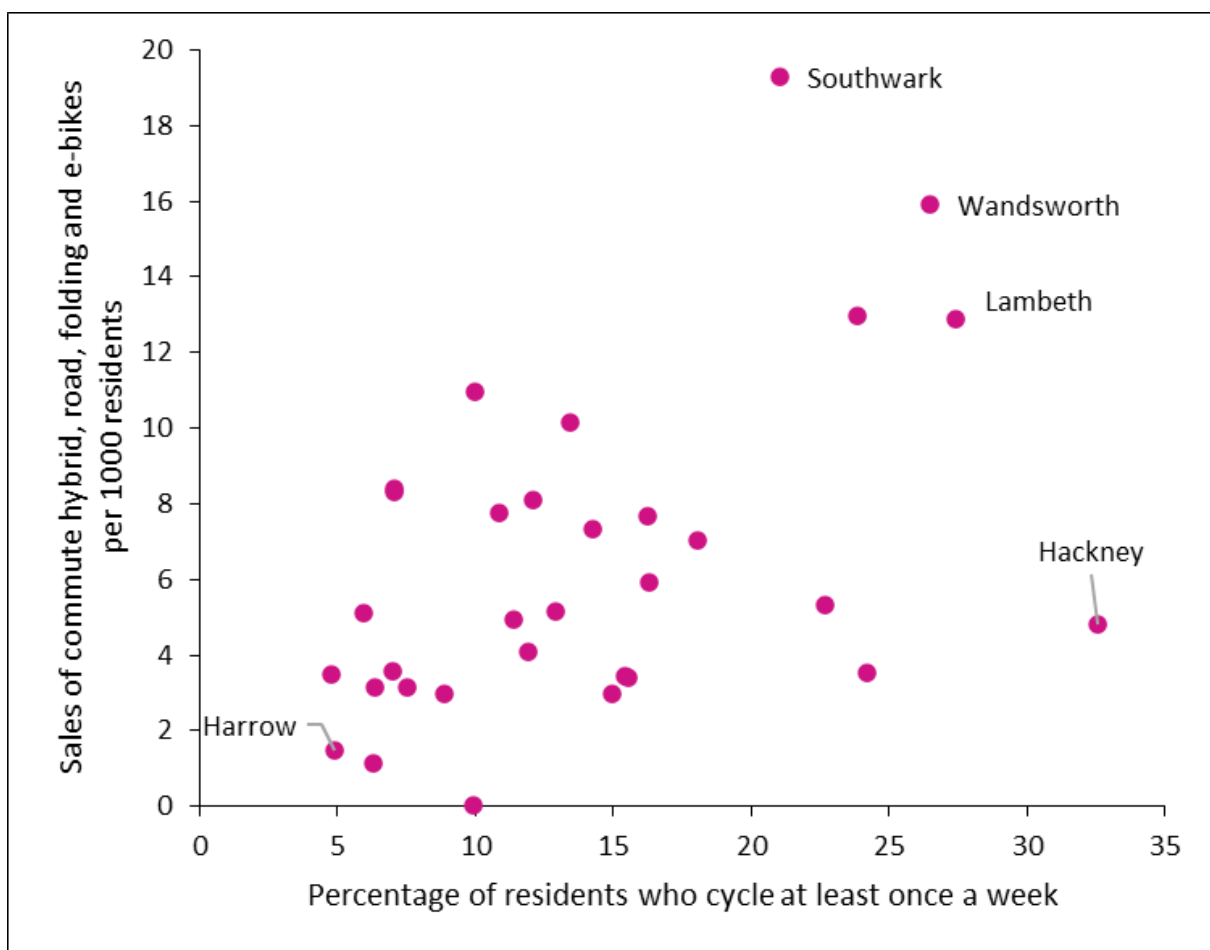
<sup>8</sup> The [Market Data Service](#), administered by Sports Marketing Surveys Inc (SMS) is run not-for-profit by the [Bicycle Association](#) for the benefit of the UK cycling industry.



A positive relationship between bike mode share and number of bikes sold in EU countries was demonstrated in a report for the European Cyclists Federation in 2014<sup>9</sup>. The report also showed a positive relationship between bike mode share and the average price of bikes sold. In other words, in countries with higher cycling levels people tend to buy more bikes and more expensive bikes.

Figure 3 shows that there is some relationship between the level of cycling at borough level (measured as the percentage of residents who cycle at least once a week) and sales of bikes that are typically used for travel (commute hybrid, road, folding and e-bikes) (normalised per 1000 residents). Lambeth, Wandsworth and Southwark, all of which have high cycling levels, also have high sales of bikes. Harrow, which has low cycling levels, has much lower sales of bikes. Note that the market data used for this figure includes ‘click and collect’ and instore sales only. On-line purchase (which is a significant and increasing proportion of all sales) is excluded so the volume of sales will be underestimated<sup>10</sup>.

**Figure 3: Number of sales of commute hybrid, road, folding and e-bikes per 1000 population in 2020 and percentage of residents who cycle at least once a week, by London borough in 2019/2020<sup>11</sup>**



<sup>9</sup> Blondiau T and van Zeebroeck B (2014) [Cycling Works. Jobs and Job Creation in the Cycling Economy](#). Report for the European Cyclists’ Federation.

<sup>10</sup> We exclude direct online sales because they are not necessarily related to the district where the sale took place. Some retailers allocate all of their online sales to one store which distorts the figures for some areas.

<sup>11</sup> Sales of bikes from Bicycle Association’s Market Data Service. Cycling levels as for Figure 2. We have excluded the City of London which is an ‘outlier’ in terms of sales per capita due to its low population.

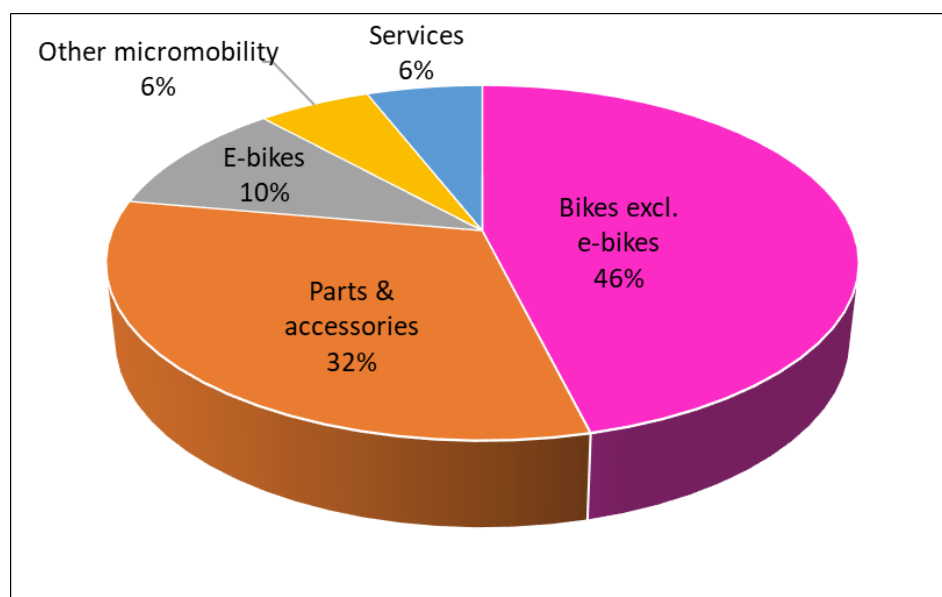
Appendix B includes the equivalent figures for sales of parts, accessories and clothing (PACs) and services/repairs which show a similar pattern to Figure 3, i.e. that the boroughs with the highest volume of services/repairs and sales of PACs tend to be those with high levels of cycling.

Table 1 shows the estimates of sales by value of cycling products and services in London stores in 2020 was nearly **£160 million**. Bike shops in London were estimated to sell nearly 230,000 new bikes (of which over 10,000, or 5%, were e-bikes). This is equivalent to 1 in 40 of the London population buying a new bike in 2020. The total value of bike sales (including e-bikes) was £90 million. In addition, sales of parts, accessories and clothing were worth over £50 million. Cycle services (e.g. bike maintenance) was worth over £9 million. Sales of other ‘micro-mobility’ products (such as scooters) were also worth over £9 million. The breakdown by sales value is shown in Figure 4.

**Table 1: Estimates of cycling products and services sales, by value (£) in London in 2020<sup>12</sup>**

Category	Sales value (£)
All bikes except e-bikes	£73,451,000
E-bikes	£16,696,000
Parts, accessories and clothing	£50,441,000
Services	£9,438,000
Other micro-mobility	£9,198,000
<b>Total</b>	<b>£159,224,000</b>

**Figure 4: Breakdown of bike sales by value in London by category in 2020**



Bike retailers are also helping to support cycling through their community activities, creating a virtuous circle. A survey of the Bicycle Association’s members show that in the year to July 2021 more than half

<sup>12</sup> Source: Bicycle Association Market Data Service (MDS). Sales value rounded to nearest £1000. This data includes online, ‘click and collect’ and instore sales for a particular bricks and mortar store. We have also allocated the sales from London-based online only stores on a per capita basis and scaled up the total according to the estimated market share (70%) represented by the Bicycle Association’s Market Data Service.

had offered discounts to key workers and more than half had donated products to a local cycling activity<sup>13</sup>.

London also has significant bike manufacturing capacity. For example Brompton, based in the borough of Ealing, sold around 59,000 bikes in the 12 months to March 2020, while turnover rose by more than a third to over £57 million<sup>14</sup>. In 2021 Brompton were reported to be making additional investment to meet the growing demand which had outstripped supply<sup>15</sup>. Other significant bike and cycle product wholesalers in London include electric bike manufacturer Gocycle, as well as global companies Specialized and Canyon<sup>16</sup>. There are also large cycle clothing and accessory companies such as Rapha who recently doubled the capacity of their premises in London<sup>17</sup>. The total turnover from bike and cycling product manufacture and wholesale in London is estimated at around **£160 million in 2020**<sup>18</sup>.

The value of bike sales, services and manufacturing to the London economy was estimated using an approach previously adopted by economic analysts SQW in research for the Bicycle Association<sup>19</sup>. SQW calculated the gross value added (GVA, the value of goods minus their cost of production) by applying a standard 'turnover to GVA ratio' for bike retail, based on data from the Annual Business Survey for businesses in the relevant Standard Industrial Classification (SIC). We have extended that approach to also apply it to services (such as bike repair) and bike manufacture. The total GVA from bike sales, services and manufacturing, summarised in Table 2, is estimated at over **£90 million in 2020**.

**Table 2: Value of bike manufacture, and sales of cycling products and services to the London economy (rounded to nearest £1,000)**

	Standard Industrial Classification <sup>20</sup>	Assumed ratio of GVA to turnover <sup>21</sup>	Gross Value Added (£) (d)
Bicycle sales	SIC47.78 (a)	23% (a)	20,914,000
Sales of parts, accessories and clothing	SIC47.78 (a)	23% (a)	11,702,000
Other micro-mobility sales	SIC47.78 (a)	23% (a)	2,134,000
Repair/Services	SIC95.29 (b)	62% (b)	5,851,000
Bicycle and PAC manufacture	SIC30.92 (c)	31% (c)	50,125,000
<b>TOTAL</b>			<b>90,727,000</b>

<sup>13</sup> Sports Marketing Surveys (2021) The Bicycle Association Cycling Industry Census 2021. August 2021.

<sup>14</sup> Brompton Bicycle (2020) [Annual Report](#)

<sup>15</sup> Thomas D (2021) [Brompton pedals faster to keep up with global demand](#). Article in the Financial Times, 13/01/21

<sup>16</sup> [Gocycle](#), [Specialized](#) and [Canyon](#) are based in Kingston upon Thames while [Rapha](#) has recently moved to a new premise in Islington.

<sup>17</sup> Macmichael S (2021) [Rapha to move to new headquarters in London](#). Article in Road.CC, 22/09/21

<sup>18</sup> Figures derived from market and annual reports or personal communication between the Bicycle Association and individual manufacturers.

<sup>19</sup> SQW (2017) [The economic value of the bicycle industry and cycling in the United Kingdom](#). Report for the Bicycle Association, March 2017.

<sup>20</sup> Office for National Statistics. [UK Standard Industrial Classification \(SIC\) Hierarchy](#).

<sup>21</sup> Scottish Government (2019) [Scottish Annual Business Statistics](#) We have assumed that the GVA/turnover ratio will be similar for London.

- a. SIC Class , used GVA ratio for 'retail trade',
- b. SIC Class 95.29, used GVA ratio for other service activities'
- c. SIC Class 30.92, used GVA ratio for 'manufacture of basic and fabricated metals, machinery, motor vehicles and other transport equipment'. Although this may underestimate the GVA from PAC manufacture alone it was difficult to disaggregate these figures.
- d. Sales value from Table 1 multiplied by ratio of GVA to turnover

## 5. Wider economic benefits of cycling in London

Alongside the direct economic benefits of bike and PAC manufacturing, and sales of cycling products and services, cycling in London yields benefits in improved health, cleaner air, lower carbon emissions and less congestion, all of which can be monetised.

In this case study we have attempted to provide updated figures on the economic benefits of cycling for the whole of Greater London which are summarised in Table 3. This shows that cycling in London currently contributes around **£1.3-£1.4 billion** to the London economy.

Some of the specific benefits we have estimated include:

- Around 270 premature deaths avoided per year.
- Nearly 1,900 serious illnesses avoided per year including over 800 hip fractures, around 600 cases of depression and dementia, over 300 cases of coronary heart disease and 200 cases of type 2 diabetes.
- Around 216 million vehicle km not driven per year.
- Over 37,000 tonnes of greenhouse gas emissions avoided per year.
- Over 77,000 kg deadly nitrogen oxides (NOx) emissions and 11,000 kg of particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions avoided per year.

Cycle tourism is estimated to generate significant economic benefits for the UK as a whole<sup>22</sup> and in a more typical non-pandemic year this is likely to be the case for London as well. For example, the Prudential RideLondon, a multi-day festival of cycling which attracts over 200,000 unique spectators and nearly 100,000 participants, is estimated to have generated £26.9 million (2020 prices) in direct economic benefits for London<sup>23</sup>. An evaluation of the economic impact of the UK stages of Le Tour (the Tour de France) in 2014, for the UK host regions showed that it produced an economic benefit of £22.3 million (2020 prices) for London alone<sup>24</sup>. With a single large event contributing around £20-30 million in economic value, and at least half a dozen large bike events in a more typical year in London, the **value of cycle tourism is likely to be around £50-100 million**. Other estimates confirm that large bike events can generate significant economic benefit for local economies<sup>25</sup>.

<sup>22</sup> See Newson C and Sloman L (2018) [The Value of the Cycling Sector to the British Economy: A Scoping Study](#). Report for the Bicycle Association, June 2018 and Cycling UK (2020) [Economic Benefits of Cycle Tourism](#).

<sup>23</sup> Event impacts. [Ride London 2015 Case Study](#). Source Prudential Ride London 2015 evaluation research, Futurethinking. Economic benefits expressed in 2020 prices using Bank of England inflation calculator.

<sup>24</sup> Estimated value of £19.5 million expressed in 2020 prices. Leeds City Council (2014) [Three Inspirational Days](#). Background paper. Report commissioned by Leeds City Council, Transport for London, UK Sport and TdFHUB2014.Ltd

<sup>25</sup> For example the Mountain Bike World Cup held in Scotland over 3 days in 2017 was estimated to generate £37 million for the local economy. BVEP (undated) [The UK events report. How events deliver the UK industrial strategy](#).

This total figure of £1.3-1.4 billion is likely to underestimate the benefits of cycling in London. For example it does not include the reduction in casualties associated with the introduction of low traffic neighbourhoods<sup>26</sup>, the health benefits of noise reduction, and lower costs associated with reduced wear and tear on the roads.

**Table 3: Summary of the economic benefits of cycling to the London economy (£ million).** Wider benefits based on November 2019 – November 2020 levels of cycling in London. Bike product benefits based on 2020 sales data. Details of assumptions used can be found in Appendix C.

Benefits	Economic value (£m)	Source of estimate
<b>Wider benefits</b>		
Reduced premature death	762	WHO HEAT model
More productive workforce (less absenteeism due to illness)	248	Reduction in sick days due to cycling * no. employed cyclists aged 20-64 * GVA per filled job per day in London
Reduction in congestion	117	Avoided km driven in London * TAG values of congestion
NHS savings through reduction in serious illness	19	Sports England MOVES model
Reduction in greenhouse gas emissions	14	Avoided km driven in London * GHG emission factors* TAG high value GHG
Reduction in pollutant emissions	5	Avoided km driven in London * pollution emission factors* TAG values pollution
<b>Cycling tourism</b>	50-100	Economic impact of single large event scaled up for non-pandemic year
<b>Cycling products (GVA)</b>		
Bike & PAC manufacture	50	See Table 2
Bike & PAC retail sales	35	See Table 2
Bike repairs/services	6	See Table 2
<b>Total</b>	<b>1,305-1,355</b>	

TfL have summarised some additional economic benefits of investing in measures that increase walking and cycling<sup>27,28</sup>:

<sup>26</sup> Goodman, A, Furlong J, Laverty A A, Thomas A, and Aldred R (2021). [Impacts of 2020 Low Traffic Neighbourhoods in London on Road Traffic Injuries](https://doi.org/10.32866/001c.25633). Findings, July 2021. <https://doi.org/10.32866/001c.25633>.

<sup>27</sup> Transport for London. [Economic benefits of walking and cycling](#) webpage.

<sup>28</sup> Transport for London. [Walking and cycling: the economic benefits](#). Summary pack.

- Boosting the high street and local centres – high street walking, cycling and public realm improvements can increase retail sales by up to 30% thus protecting high street jobs.
- Reducing absences and increasing productivity – employees who cycle regularly take 1.3 fewer sick days than those who don't.
- Keeping the city moving for business – segregated cycle lanes on Blackfriars Bridge helped move 5% more people in the peak am than before.
- Wider economic benefits – every £1 spent on walking and cycling returns £13 of wider benefits to the economy.
- If every Londoner walked or cycled for 20 minutes each day, that would save the NHS £1.7 billion in treatment costs over 25 years.

Measures to restrict traffic in struggling business areas during lockdown have also been found to help support local businesses<sup>29</sup>.

## 6. Jobs in the bicycle economy

As levels of cycling increase, more green jobs are created. The Mayor of London has pledged to “*double the size of the green economy by 2030 with the aim of doubling the level of green jobs in London over the next 10 years*”<sup>30</sup>. Jobs in the cycling sector can provide a significant proportion of the 317,000 green jobs that the Mayor hopes to create<sup>31</sup>.

Cycling jobs, and the skills needed to do them, are varied, ranging from the highly skilled and technical (e.g. design and manufacture) through to sales, training, administration, construction and delivery<sup>32</sup>.

The previous 2018 study for the Bicycle Association estimated that cycling generates around 64,000 full time equivalent (FTE) jobs in the UK including jobs in cycle tourism, bike sales and repair, cycle delivery, bike manufacturing, cycle infrastructure construction, and cycle hire schemes<sup>33</sup>. Note that around half of these are in cycle tourism, which is difficult to disaggregate at a local level.

Most of these figures are derived from a study for the European Cyclists' Federation (ECF) which divided the cycling economy into five sub sectors: retail, production, infrastructure, tourism and services<sup>34</sup>. The study translated estimates of the economic value by turnover in each sub sector into Full Time Equivalent (FTE) jobs based on FTE/turnover business statistics. We have used some of the UK specific factors from the ECF study combined with other data to estimate the number of jobs generated by cycling in London in 2020.

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<sup>29</sup> E.g. see case study of Wandsworth. Mayor of London (2020) [Covid-19 and the recovery of life at night](#). December 2020.

<sup>30</sup> Boscia S (2021) [Mayor of London election: Sadiq Khan pledges to create 170,000 green jobs](#). Article in City AM, 06/04/21.

<sup>31</sup> In 2019/20 London's 'green economy' was worth £48 billion, employing an estimated 317,000 people across 14,000 businesses. kMatrix Data Services (2020) [London's Low Carbon and Environmental Goods and Services Sector](#). Interim Report for Mayor of London. November 2020.

<sup>32</sup> UNECE, UNEP and WHO (2017) [Riding towards the green economy: cycling and green jobs](#)

<sup>33</sup> Newson C and Sloman L (2018) [The value of the cycling sector to the British economy: A scoping study](#). June 2018. Report for the Bicycle Association.

<sup>34</sup> Blondiau T and van Zeebroeck B (2014) [Cycling Works. Jobs and Job Creation in the Cycling Economy](#). Report for the European Cyclists' Federation.

We have also included an alternative estimate for infrastructure jobs. There is evidence that investment in cycle lanes is one of the best ways of creating jobs through infrastructure spend, more than any other infrastructure project, aside from energy efficiency in buildings (with road building showing the lowest potential)<sup>35</sup>. This study for the TUC showed that around 33 jobs are created for every £1 million invested in walking/cycling infrastructure over a two year period.

Although there were no large bike events in London in 2020, in a more typical year the jobs associated with cycle tourism are likely to be significant. We estimate that one large bike event (Le Tour in 2014) supported nearly 200 FTE jobs<sup>36</sup>. With half a dozen large bike events in London attracting hundreds of thousands of visitors the jobs associated with cycle tourism could reach 500-1,000 in a non-pandemic year. Table 4 shows the **number of jobs generated by cycling in London as around 6,000-8,000**. Around half of these are generated by the bike manufacturing and retail industry. Note this is likely to be an underestimate as it does not include the jobs associated with bike training (e.g. bikeability instructors), sports coaching, freelance bike mechanics (e.g. Dr Bike), public policy and administration, advocacy, or communications (e.g. bike press).

**Table 4: Estimates of current cycling jobs in London**

Cycling sub-sector	Estimated no. FTE jobs	Notes
<b>Production</b>		
-Bike manufacture and wholesale	792	Based on employment at London based manufacturers plus ECF factor for wholesale and assumes 97% bikes sold in London are imported
<b>Retail</b>		
-Bike and bike accessory sales and bike repair	2,126	ECF factor combined with bike and accessory sales turnover and repair turnover in London plus additional data
<b>Infrastructure</b>	460 (1610 )	ECF factor combined with TfL 2020/21 spend on Healthy Streets Programme <sup>37</sup> (Alternative figure using TUC factor <sup>38</sup> )
<b>Tourism</b>	0	Due to cancellation of events in 2020

<sup>35</sup> Minio-Paluello M and Markova A (2020) [Can an infrastructure stimulus replace UK jobs wiped out by COVID19 crisis?](#) Report by Transition Economics for the TUC. June 2020. Although not stated these jobs are likely to be mainly in construction plus design and public administration.

<sup>36</sup> The revenue from overnight and day visitors to London for Le Tour in 2014 combined with the ECF factors, converted to pound sterling and expressed in 2020 prices. Revenue estimates from Leeds City Council (2014) [Three Inspirational Days](#). Background paper. Report commissioned by Leeds City Council, Transport for London, UK Sport and TdFHUB2014.Ltd

<sup>37</sup> Transport for London (2021) [Delivering the London Streetspace Programme and priority schemes in the Healthy Streets Programme: 2020/21](#). Programmes and Investment Committee, Agenda Item 13, Table 6. 20/07/21.

<sup>38</sup> Minio-Paluello M and Markova A (2020) [Can an infrastructure stimulus replace UK jobs wiped out by COVID19 crisis?](#) Report by Transition Economics for the TUC. June 2020.

	(500-1,000)	Estimate for a non-pandemic year
<b>Services</b>		
-Bike hire	240	ECF factor combined with no. bikes for hire in London in 2019
-Bike delivery	2025	Previous estimate for GB and assuming 27% of gig workers are based in London
<b>Total</b>	<b>5,856</b> <b>(7,507-8,007)</b>	Lower estimate excluding cycle tourism Higher estimate including cycle tourism and higher infrastructure figure

A 2017 global study estimated the cycling jobs in a number of world cities including London using data collected from a small group of cities and adjusting for differences in population and cycling mode share<sup>39</sup>. This took account of a wide range of jobs including bike rental, bike messenger companies, cycle tourism as well as direct jobs in retail and manufacturing. The study estimated that the number of cycling jobs in London in 2017 was around 6,104. This figure is of a similar order of magnitude to our estimates in Table 4.

## 7. Investment in cycling encourages more cycling

There is evidence at a scheme, district and city level, that investment in quality cycle infrastructure increases levels of cycling.

Transport for London (TfL) have reported seeing large increases in cycling locally following investment in cycling<sup>40</sup> including the following:

- over 50% in some places on Cycleway 24 (Forest Road in the Waltham Forest Mini-Holland) since construction began in 2015.
- more than 35% on Cycleway 22 (Newham Greenway) since 2017.
- over 50% on new infrastructure including C5 East-West (Parliament Square to Tower Hill) and on QW1 (Waterloo to Greenwich) since completion<sup>41</sup>.
- a more than doubling of cycling in Waltham Forest in November 2020 compared to 2019 and an increase of 150% at weekends in Colliers Wood on Cycleway 7 as a result of Streetspace (emergency) cycle infrastructure installed during the pandemic<sup>42</sup>.

There is also evidence of more children cycling as a result of the introduction of Low Traffic Neighbourhoods and School Streets<sup>43</sup>.

<sup>39</sup> UNECE, UNEP and WHO (2017) [Riding towards the green economy: cycling and green jobs](#)

<sup>40</sup> Transport for London (2020) [Travel in London Report 13](#)

<sup>41</sup> London Assembly Transport Committee (2018) [London's Cycle Infrastructure](#).

<sup>42</sup> Transport for London (2021) [Strategic Overview of Cycling in London Annual Update](#). Customer Service and Operational Performance Panel, agenda item 8, 24/02/21

<sup>43</sup> Ibid.



Schemes funded by the UK's Cycle City Ambition project, which provided £191 million in capital grants to eight cities between 2013 and 2018, also showed evidence of increased cycling that was highly likely or likely to be attributable to the CCA investment<sup>44</sup>.

The city of Seville in southern Spain increased cycling trips fivefold in just five years as a result of building 120km of segregated cycle paths and a 2,500 bike hire scheme<sup>45,46</sup>. The result of this, in a city which had no culture of cycling and that had been considered 'too hot to cycle' was that cycling mode share increased from about 1-2% to about 6%. Remarkably the basic network (77 km) was developed in two years.

## 8. Increasing cycling in London to meet net zero targets

The Mayor of London has an ambitious aim to make London net zero by 2030<sup>47</sup>. He has recently reaffirmed that aim in the face of budget challenges and pledged to accelerate climate action as part of the recovery from the pandemic<sup>48</sup>. The Mayor's Transport Strategy also has an overarching goal for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041 (compared to 63% in 2019)<sup>49</sup>.

Climate action means tackling road transport which was responsible for one-fifth of London's greenhouse gas emissions in 2018<sup>50</sup>. Motor vehicle mileage on London's roads increased to a record 26 billion kilometres in 2019<sup>51</sup>, the majority (77%) of which was cars and taxis<sup>52</sup>. Road transport also accounts for around half of London's nitrogen oxide (NOx) emissions and a third of particulate (PM) emissions contributing to poor air quality<sup>53</sup>. Switching more trips from cars and taxis to cycling can help to reduce carbon and pollutant emissions, congestion and road danger.

Even with the most optimistic assumptions about electric vehicle uptake, only about one-third of car mileage is likely to be zero carbon by 2030<sup>54</sup>. This means that the majority of car mileage will be fossil-fuelled and incompatible with net zero targets. Some of this high carbon mileage can be avoided by better planning and use of remote technologies, but there will also need to be a significant shift in travel to low or zero carbon forms of travel including cycling.

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<sup>44</sup> Sloman L et al (2019) [Summary and Synthesis of Evidence: Cycle City Ambition Programme 2013-2018](#). Report for DfT.

<sup>45</sup> Marques R., Garcia-Cebrian J. and Calvo-Salazar M. (2018) [Seville: how a small Spanish city became a cycling hub for all](#). Euronews.

<sup>46</sup> Marques R., Hernandez-Herrador V., Calvo-Salazar M. and Garcia-Cebrian J (2015) [How infrastructure can promote cycling in cities: lessons from Seville](#). Research in Transportation Economics 53, 31-44.

<sup>47</sup> Mayor of London. [Zero Carbon London](#) website

<sup>48</sup> Mayor of London (2020) [Net-zero carbon target](#) Mayors response to question from Leonie Cooper at Meeting of the London Assembly, 19/07/20.

<sup>49</sup> Transport for London (2018) [The Mayor's Transport Strategy](#)

<sup>50</sup> In 2018 London's road transport emissions were 6,225 kt CO<sub>2</sub>e out of a total of 31,023 kt. Greater London Authority. [London Energy and Greenhouse Gas Inventory \(LEGGI\)](#)

<sup>51</sup> Department for Transport (2020) [Table TRA8904: Motor vehicle traffic \(vehicle kilometres\) by local authority in Great Britain, annual from 1993](#).

<sup>52</sup> Department for Transport. [Road Traffic Statistics: London](#)

<sup>53</sup> Transport for London (2020) [Travel in London Report 13](#)

<sup>54</sup> Our estimates based on the EV uptake in the Climate Change Committee's [Sixth Carbon Budget](#). Note that the CCC estimate 97% of new cars/vans will be Battery Electric Vehicles by 2030 which is much more optimistic than the government's estimate of 50-55% as shown in their [2035 delivery plan](#)

Given the urgency of the climate threat, the next ten years are critical in terms of reducing carbon. Because the impacts of carbon are cumulative, a tonne of carbon reduced today is more effective than a tonne of carbon reduced tomorrow. The advantage of cycle infrastructure and behaviour change programmes is that they can be rolled out quickly, providing early cuts in traffic carbon. They are also highly cost-effective, with cycling projects typically showing very high benefit cost ratios<sup>55</sup>. Earlier work for the Bicycle Association showed that an e-bike grant scheme would be more than twice as effective at reducing carbon, per pound spent, as the grants previously offered to buyers of some electric cars<sup>56</sup>.

**“Cycling is the mode of transport with the greatest untapped potential in London.”<sup>57</sup>**

The potential for further growth in cycling in London is substantial: research by TfL found that 68% of car trips by London residents are short enough to be made by bike, and do not involve transport of heavy items or form part of a succession of ‘non-cyclable’ trips<sup>58</sup>. TfL’s analysis suggests that every day, 3.1 million car driver trips and 1.6 million car passenger trips by London residents have the potential to switch to cycling (or in some cases to walking). More than half of these trips were less than 3km. A previous analysis of the dataset on which the TfL research is based suggests that this is equivalent to 27% of car driver mileage and 25% of car passenger mileage by London residents<sup>59</sup>.

And this switch to cycling is available to a large majority of Londoners of all backgrounds and ages. From surveys conducted by TfL 81% of Londoners say they can cycle, including 76% of disabled people<sup>60</sup>. TfL’s analysis showed that the potential for cycling was greater among women, and the greatest potential for cycling replacing car trips was in outer London and in the east of London where cycling levels are currently low<sup>61</sup>. Figure 8 shows the potentially cycleable car trips by borough.

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<sup>55</sup> Transport for London. [Walking and cycling: the economic benefits](#). Summary pack.

<sup>56</sup> Newson C and Sloman L (2019) [The Case for a UK Incentive for E-bikes](#). Report for the Bicycle Association.

<sup>57</sup> TfL (2017) [Mayor’s Transport Strategy: Supporting Evidence](#). Challenges and Opportunities for London’s Transport Network to 2041. July 2017.

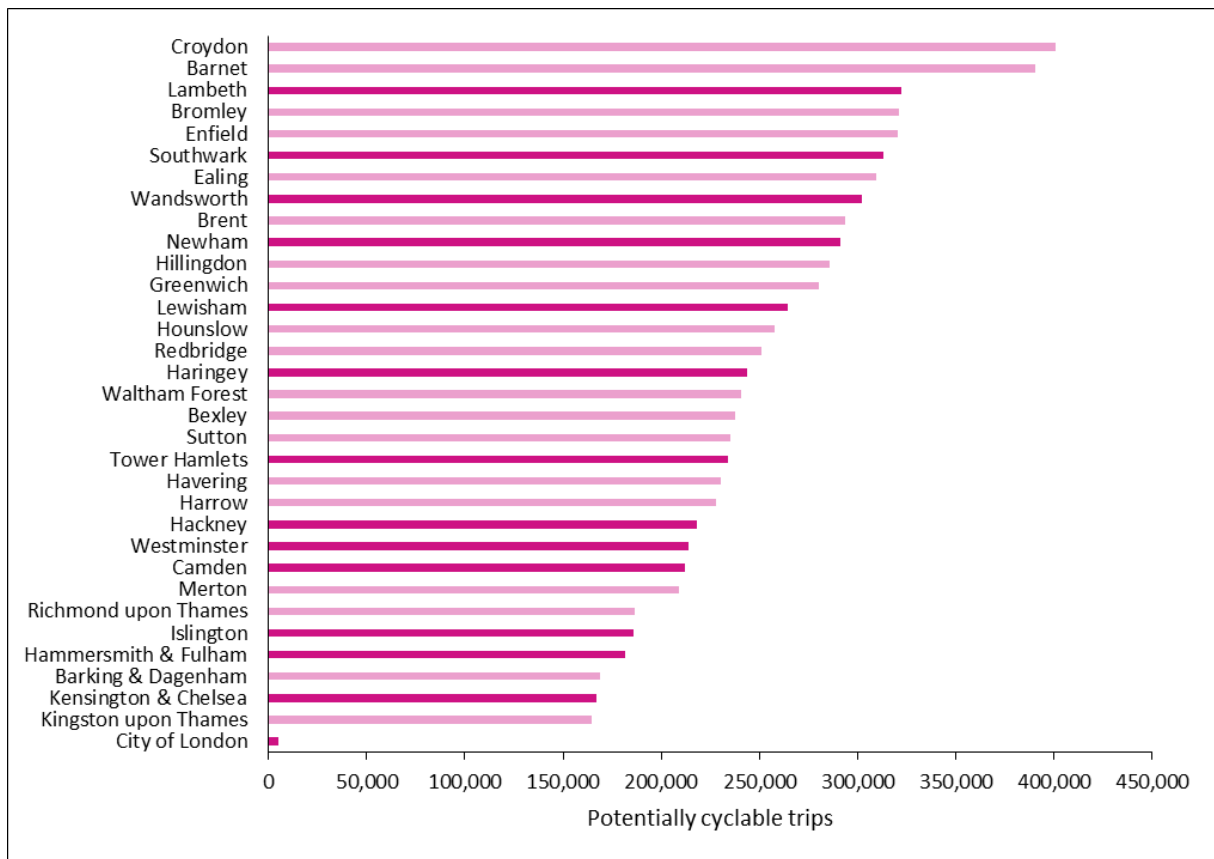
<sup>58</sup> Transport for London (2017) [Analysis of Cycling Potential 2016](#). March 2017

<sup>59</sup> Sloman L. and Hopkinson L. (2019) [Segregated cycleways and e-bikes – the future of urban travel](#). Briefing for Friends of the Earth. April 2019

<sup>60</sup> Transport for London. [Walking and cycling: the economic benefits](#). Summary pack.

<sup>61</sup> Transport for London (2017) [Analysis of Cycling Potential 2016](#). March 2017

**Figure 8: Potentially cyclable trips made by private vehicles by borough<sup>62</sup>.** (outer London boroughs in light pink)



The need to avoid or switch up to two-thirds of car mileage by 2030 to meet the Mayor’s carbon target will be challenging and it will be necessary to pull every policy lever hard to achieve this. This will include realising the large untapped potential for cycling. We have therefore looked at converting the potentially cyclable car trips into *actual* cycle trips to illustrate the scale of increased cycling likely to be needed to meet the Mayor’s Net Zero carbon target.

Taking the number of car driver trips in 2019 that are potentially cycleable and increasing these in line with forecast population growth, we estimate that this could result in a cycle mode share of 14% and a six-fold increase in bike trips by 2030 compared to 2019<sup>63</sup>. We have also assumed that the average distance per cycle trip will increase by 50% due to greater uptake of e-bikes which are generally used for longer journeys. About half of all trips by e-bikes substitute a journey that otherwise would have been by car; making them highly effective in the reduction of carbon, pollution and congestion<sup>64</sup>.

While a six-fold increase in cycling sounds ambitious it should be compared to what has been achieved elsewhere, for example:

<sup>62</sup> Ibid.

<sup>63</sup> Although the number of car trips will need to be reduced significantly by 2030 (which will affect the total number of trips), for simplicity we have assumed the total number of car and other trips will increase in line with forecast population growth.

<sup>64</sup> Newson C and Sloman L (2019) [The case for a UK incentive for e-bikes](#). July 2019. Report for Bicycle Association.

- More than 80 world cities had a cycling mode share of more than 14% even ten years ago, including Cambridge and York<sup>65</sup>.
- Seville achieved a five-fold increase in cycling over five years.
- Frankfurt achieved a more than tripling in bike mode share from 6% to 20% from the late 1990s to 2018<sup>66</sup>.
- Tower Hamlets and Hackney Council achieved a tripling of cycling trips over the period 2002-2010<sup>67</sup>.
- There are 20 English Local Authorities where the percentage of adults cycling at least once a week has increased by at least 50% in just four years (between 2015/16 and 2019/20)<sup>68</sup>.

Not only is a six-fold increase in cycling likely to be necessary to meet carbon targets, and achievable, it is also highly beneficial to the London economy, as the next section shows.

TfL has also considered the potential benefits of a similarly large increase in cycling. As an illustrative intervention for the Mayor's Transport Strategy TfL looked at the potential impacts of increasing bike mode share to 15% by 2041<sup>69</sup>. They found that this would result in a reduction in car trips of 1.2 million per day and reduction in traffic congestion of 13% across London<sup>70</sup>. They found that much of the growth in cycling would be in orbital trips and travel in outer London.

The Mayor and TfL's London Streetspace plan, announced in 2020 to enable more people to safely walk and cycle, is designed to accommodate a possible ten-fold increase in cycling and five-fold increase in walking when lockdown restrictions are eased<sup>71</sup>. This also illustrates the very large potential for increases in cycling in London.

As well as replacing car passenger trips, bikes can also replace large numbers of van trips. It is estimated that cargo bikes and electrically-assisted cargo bikes (e-cargo bikes) could replace around 10-30% of van trips by delivery and service companies, equivalent to up to 7.5% of mileage<sup>72</sup>. A new round of DfT funding for e-cargo bikes will help to encourage more businesses to invest in e-cargo bikes and counter the increase in diesel delivery vans<sup>73</sup>.

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<sup>65</sup> London was number 208 on this list. City Clock. [Cycling Mode Share Data for 700 Cities in 40 Countries](#)

<sup>66</sup> Buehler R, Teoman D and Shelton B (2021) [Promoting Bicycling in Car-Oriented Cities: Lessons from Washington, DC and Frankfurt Am Main, Germany](#). Urban Sci, Vol 5 (3), pp58.

<sup>67</sup> Deegan B. (2016) [Cycling infrastructure in London](#). Proceedings Institution of Civil Engineers – Engineering Sustainability, vol 169, Issue 3, pp92-100.

<sup>68</sup> While there is natural variation year on year, this was a period over which the England average decreased. Some boroughs, for example Tonbridge and Maling, more than doubled the percentage of adults cycling at least once a week, from 6% in 2015/16 to 14% in 2019/20. Department for Transport (2020). [Walking and Cycling Statistics](#).

<sup>69</sup> TfL (2017) [Mayor's Transport Strategy: Supporting Evidence Outcomes Summary Report](#). July 2017.

<sup>70</sup> A 15% bike mode share in 2041 is equivalent to 4.8m cycle trips out of a total of 32m trips (since revised to 33m trips).

<sup>71</sup> Mayor of London (2020) [Mayor's bold new Streetspace plan will overhaul London's streets](#). Press release 6 May 2020.

<sup>72</sup> Cairns S and Sloman L (2019) [Potential for e-cargo bikes to reduce congestion and pollution from vans in cities](#). Report for the Bicycle Association, July 2019.

<sup>73</sup> Energy Saving Trust (2021) [£400,000 of funding made available for businesses by the eCargo Bike Grant Fund](#). Press release, 03/08/21.

## 9. Economic impact of increasing cycling in London

We have estimated the benefits resulting from a six-fold increase in cycling trips across London by 2030 using DfT's Active Mode Appraisal Toolkit (AMAT)<sup>74</sup>. Table 5 below shows that the wider benefits of this increase in cycling levels are of the order of **£4.6 billion in 2030**. Due to the large uncertainties in the underlying assumptions these estimates should be regarded as indicative only.

Some of the specific benefits include:

- A reduction in around 4 billion vehicle km driven by cars in 2030.
- A reduction in greenhouse gas emissions of nearly 412,000 tonnes in 2030 (taking account of assumed uptake of electric vehicles and reduced emissions from the average car).

It would also cut pollutant emissions, including NO<sub>2</sub> and the fine particulates (PM<sub>2.5</sub>) produced by all vehicles (including electric ones) through road, brake and tyre wear and tear.

Note these figures are not directly comparable with those in Table 3 due to differences in methodology.

**Table 5: Summary of value of wider benefits of cycling to the London economy in the year 2030 based on a 6-fold increase in cycling levels (£ million) (2020 prices).** Details of assumptions used are given in Appendix D.

Wider Benefits	Economic value (£ m)
Reduced premature death	2,728
Reduced congestion	972
More attractive journey surroundings	457
More productive workforce (less absenteeism due to illness)	364
Fewer collisions	42
Lower air pollutant emissions	19
Lower greenhouse gas emissions	10
Less noise	3
Reduced road maintenance costs	1
<b>Total</b>	<b>4,596</b>

In addition to reduced car trips, cargo bikes and e-cargo bikes have significant potential to replace van trips. Based on 2019/20 levels of van traffic in London and assuming 7.5% mileage can be replaced by cargo and e-cargo bikes, this would be equivalent to a reduction of a further 0.4 billion vehicle km, and associated congestion, carbon and air pollutant emissions.

<sup>74</sup> The AMAT tool is designed to assess the overall benefits and costs of proposed cycling and walking interventions. Department for Transport (2020) [Active Transport Appraisal Toolkit User Guide](#). It is a two-case model requiring a 'before' and 'after' case in terms of cycling trips and type of infrastructure.

Sales of cycling products and services and bike production are also likely to experience significant growth as a result of higher cycling levels. Three European cycling associations have forecast bike sales in Europe to increase by 47% over the next ten years following post-Covid investments in cycling<sup>75</sup>.

There is evidence from the European Cyclists Federation (ECF) that with increasing bike mode share the average bike price goes up (as people trade up)<sup>76</sup>. There has already been a more than doubling of production of conventional bikes in the UK since 2016 which does not take account of imported frames which are assembled by individual cycle dealers<sup>77</sup>.

The enormous potential growth in e-bike sales, which cost substantially more than the average conventional bike, will also increase bike retail turnover and employment. As noted in Section 4, e-bikes accounted for around 4% of all bicycles sold in London in 2020. This compares to the Netherlands, Belgium and Austria where e-bikes now account for 30% of all bicycles sold annually<sup>78</sup>. It is estimated that about half of all bikes sold in the EU will be electric by 2025<sup>79</sup>. Halfords estimate that e-bike volume sales in London will more than double by 2030 compared to sales in 2019<sup>80</sup>.

The ECF estimate that a doubling of bicycle mode share corresponds to a 42% increase in turnover for bike retail (bicycle sales, bike accessory sales and bike repair)<sup>81</sup>. They assume that a 42% increase in retail turnover leads to a 42% increase in industry turnover, which in turn leads to an increase in bike industry employment. Based on this an increase in bike mode share from 2.4% to 14% would correspond to a near trebling of turnover, GVA and employment. Potentially this would mean the GVA from bike retail and manufacturing in London could reach around £240 million by 2030, making the **total benefits from cycling in London around £4.8 billion in 2030**.

## 10. Additional jobs from increasing cycling in London

A six-fold increase in cycling will help to create thousands of new jobs in the bike industry. A recent report by European cycling organisations estimates that employment in the bike industry is set to grow by over 200% by 2030<sup>82</sup>.

There is significant potential for increased jobs in bike logistics. Between 2015-2016 there was a 30% growth in the number of staff working in cycle logistics companies according to a survey by the European Cycle Logistics Federation<sup>83</sup>. With an estimated 2,000 cargo bikes sold for commercial use in the UK in 2020, this compares to 100,000 a year in Germany or 50,000 a year in France<sup>84</sup> illustrating

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<sup>75</sup> Cycling Industries Europe (2020) [Bike sales forecasted to grow up to 30 million per year by 2030 following post-Covid investments in cycling](#).

<sup>76</sup> Blondiau T and van Zeebroeck B (2014) [Cycling Works. Jobs and Job Creation in the Cycling Economy](#). Report for the European Cyclists' Federation (ECF).

<sup>77</sup> Bicycle Association (2021). Personal Communication with Peter Eland, Bicycle Association, 25/08/21.

<sup>78</sup> Newson C and Sloman L (2019) The case for a UK incentive for e-bikes. July 2019. Report for Bicycle Association.

<sup>79</sup> Dempsey H (2021) [Half of all bikes sold in Europe will be electric by 2025, predicts manufacturer](#). Article in The Financial Times, 09/07/21.

<sup>80</sup> 1206 transactions in 2019 forecast to increase to 2602 by 2030. Halfords (undated) [The e-bike forecast](#). Blog.

<sup>81</sup> Blondiau T and van Zeebroeck B (2014) [Cycling Works. Jobs and Job Creation in the Cycling Economy](#). Report for the European Cyclists' Federation.

<sup>82</sup> Cycling Industries Europe (2020) [New European Cycling Industry Forecast Shows Huge Growth in Bike and E-bike Sales](#). Article 02/12/2020.

<sup>83</sup> Cairns S and Sloman L (2019) [Potential for e-cargo bikes to reduce congestion and pollution from vans in cities](#). Report for the Bicycle Association, July 2019.

<sup>84</sup> Butler S (2021) [Cycling brands gear up for rapid growth in UK cargo bike market](#). Article in The Guardian, 24/07/21.

the potential for growth. One London-based logistics company which currently has around 50 e-cargo bikes in London expects to have more than 1,500 bikes by 2023<sup>85</sup>.

A joint report by UNEP, WHO and UNECE, which estimates the number of jobs associated with cycling in 37 cities including London, suggests there is the potential for 46,799 additional cycle jobs if London's cycling mode share (3%) was similar to Copenhagen's (26%)<sup>86</sup>. Pro-rated for a 14% mode share, this would mean **over 25,000 additional cycling related jobs** (on top of the existing jobs estimated in Table 4). These would form a significant proportion (8%) of the 317,000 green jobs that the Mayor hopes to create over the next ten years, and these are jobs that can be created quickly.

Note that many of these cycling jobs in London will be provided by small businesses and local retailers helping regenerate high streets in all areas of London, unlike many large scale infrastructure projects. Cycling jobs can provide an early win for the Mayor while other low carbon sectors that lack capacity, such as building retrofit, get up to speed. Moreover cycling jobs can be effectively targeted in deprived areas and at socially disadvantaged groups (eg through the creation of cycle apprenticeships and training schemes).

## 11. Additional measures to increase cycling in London

To reap the enormous economic and employment benefits of increased cycling levels there will need to be sufficient investment in cycle infrastructure and behaviour change programmes over the next ten years and/or additional restrictions on motorised road traffic to make the roads safer for cycling. The Mayor has already highlighted that he will require additional powers and resources from central government to meet his carbon targets<sup>87</sup>.

Investment in cycling in London has fallen from £23 per head for 2018/19 to around £11 per head in 2020/21, due to TfL's financial difficulties<sup>88</sup>. Other European cities invest much more in cycling. For example, Copenhagen has continued to invest more than €40 per head (around £46 at 2021 exchange rates) in bicycle infrastructure despite relatively high cycling levels<sup>89</sup>. This is equivalent to around £414 million per year in London based on 2020 population levels. Set against the much greater annual benefits of £1,225 million (excluding cycle tourism) from current cycling levels in 2020 or £4,596 million from increased cycling levels in 2030, cycling investment appears to represent very good value for money.

An alternative or complementary approach would be to reduce the amount of unnecessary road traffic by introducing a smart, fair road user charging system. For example, the Centre for London have found that instead of a flat rate fee for congestion or the Ultra Low Emission Zone, a charge based on distance, vehicle emissions and local congestion or pollution levels could cut carbon emissions and air pollution by up to a fifth while raising revenue for public transport, walking and cycling<sup>90</sup>. While the final strategy to achieve the net zero target is up to the Mayor and TfL, it is likely to require a

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<sup>85</sup> Quote from the co-founder of [E-cargobikes](#). Ibid.

<sup>86</sup> UNECE, UNEP and WHO (2017) [Riding towards the green economy: cycling and green jobs](#)

<sup>87</sup> Mayor of London (2020) [Net-zero carbon target](#) Mayors response to question from Leonie Cooper at Meeting of the London Assembly, 19/07/20.

<sup>88</sup> The Healthy Streets programme budget for 2021/21 was £96.7 million. The majority of the schemes will benefit cycling. Transport for London (2021) [Programmes and Investment Committee](#), 20/07/20. Agenda item 13, section 9.3, table 6, p78. The previous figure for the Healthy Streets programme in 2018/19 was £214m.

<sup>89</sup> Thoem J (undated) [What makes Copenhagen the world's most bicycle friendly city?](#) Article on Visit Copenhagen website.

<sup>90</sup> Barratt S, Wedderburn M and Belcher E (2019) [Green Light: Next generation road user charging for a healthier, more liveable London](#)



combination of sticks to discourage driving and carrots to encourage more sustainable travel including cycling.

## 12. Conclusions

Cycling levels in London, as in many other parts of the country, increased during the pandemic, with an additional 90,000 adults in London cycling at least once a week in 2020 compared to 2019.

With more people cycling, sales of cycling products and services increase. Using the Bicycle Association's Market Data Service (MDS) the sales value of cycling products and services in London was over £100 million while the turnover from bike and cycling products manufactured in London was around £160 million. Combined, the bike manufacturing and retail industry in London contributed over £90 million in Gross Value Added (GVA) to the London economy in 2020.

Combined with the wider benefits of improved health, reduced congestion, reduced absenteeism (and increased productivity), and reductions in greenhouse gas and pollution emissions, the economic benefits of cycling in London at 2020 levels are conservatively estimated at over £1.3-£1.4 billion.

As levels of cycling increase more green jobs are created, contributing to the Mayor's pledge of doubling the level of green jobs over the next ten years. The cycling economy in London is estimated to employ around 6,000-8,000 people. Around 40-50% of these were contributed by the bike manufacturing and retail industry, boosting the high street. New cycling jobs can also be effectively targeted in areas that need regenerating.

To meet the Mayor's zero carbon target by 2030, there will need to be a large reduction in the amount of car trips and mileage in the capital over the next ten years. Cycling is the mode of transport with the greatest untapped potential in London. Every day there are over 3 million car driver trips by London residents that have the potential to switch to cycling.

Taking the number of car driver trips that are potentially cycleable and increasing in line with forecast population growth, we estimate that this could result in a cycle mode share of 14% and a six-fold increase in bike trips by 2030. Increases of this magnitude (or higher) are likely to be needed to meet the Mayor's carbon target and similar increases have been achieved in many other world cities. The increasing popularity of e-bikes will make this easier by expanding the range of people who can cycle and by increasing the average distance per trip.

An increase of cycle mode share from around 2% currently to 14% in 2030 would correspond to a near trebling of turnover, GVA and employment in the bike manufacturing and retail industry in London. It would also reduce car driver trips by around 4 billion vehicle km by 2030 and associated greenhouse gas emissions by nearly 680,000 tonnes. This increase in cycling will produce wider economic benefits of the order of £4.8 billion by 2030.

As well as bikes replacing car passenger trips, cargo and e-cargo bikes have the potential to replace up to 7.5% of van mileage by delivery and service companies, and associated carbon, pollution and congestion.

A cycle mode share of 14% by 2030 would also create over 25,000 additional green jobs, a significant proportion of the 317,000 green jobs the Mayor hopes to create over the next ten years, and these are jobs that can be created quickly.

Although the final strategy to achieve this level of increase in cycling in ten years is up to the Mayor, it is likely to require a combination of measures to avoid car travel, while investing in improved



infrastructure and behaviour change programmes that encourage more people to cycle. Set against the substantial benefits from increased cycling levels, cycling investment represents extremely good value for money.

The Bicycle Association hope to use the work to develop this case study as a template to use in other areas around the UK. This will help demonstrate the value of investing in cycling across the UK to local economies and the potential for green jobs. Using London as a first case study makes sense as London still has much to do to achieve its carbon targets and much to gain from increasing cycling levels.

Investing in cycling in London makes sense for national government as well as for London. The geography and demographics of London give it high cycling potential, which means that every pound invested in London achieves a bigger impact than if invested elsewhere. This means that investing in London will help national government to reach its target to double cycling nationally. London, with other leading cities, can also act as a model for others to follow.

## Appendix A: Additional charts of cycling levels in London

**Figure A.1. Percentage of adult residents who cycled for travel at least once a week by borough in greater London in 2019/20<sup>91</sup> (outer London boroughs in light pink)**

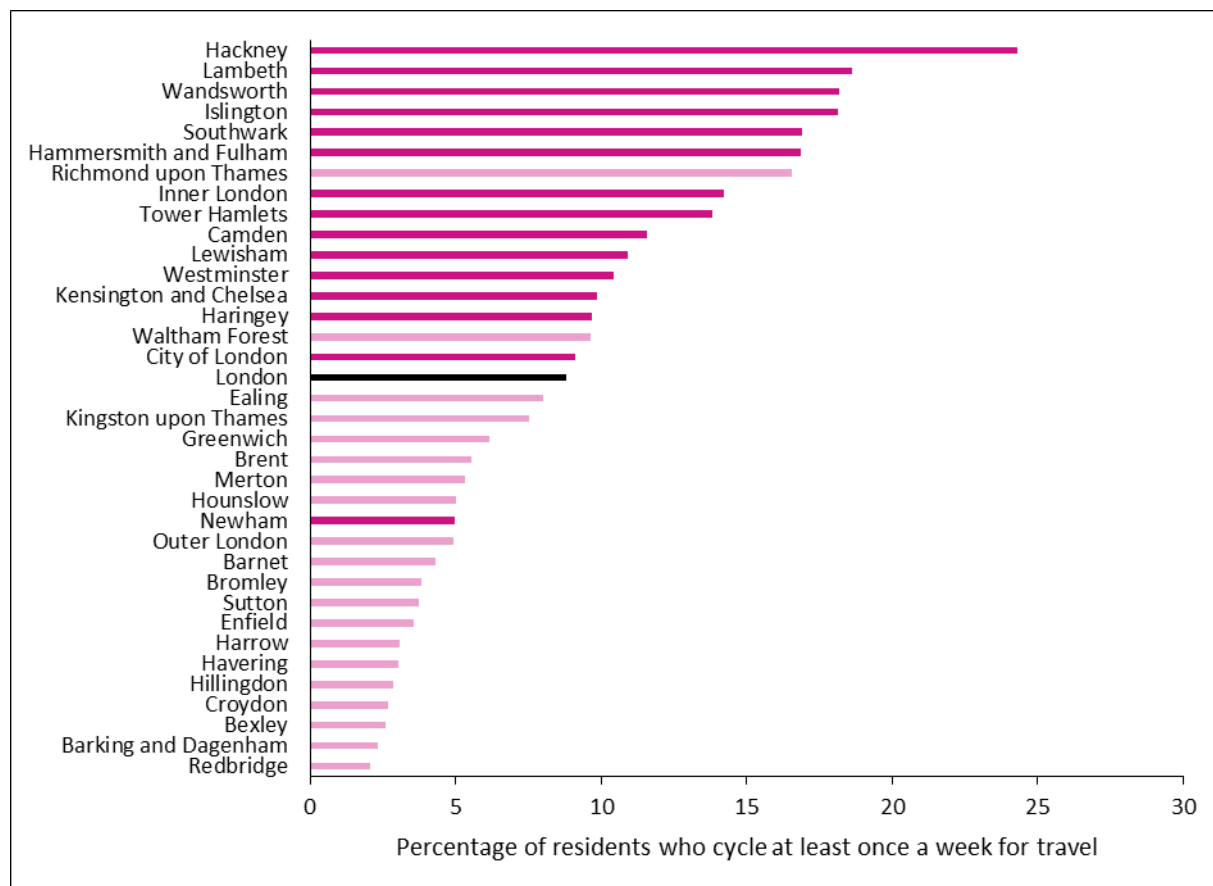


Figure A.1 above, looking just at cycling for travel purposes (i.e. excluding leisure cycling), shows that 9% of London adults cycled once a week. This varied between 14% in Inner London and 6% in Outer London. These figures provide a basis for us to estimate the car trips avoided (and hence carbon savings and pollution benefits) from current levels of cycling.

<sup>91</sup> Department for Transport (2020). [Walking and Cycling Statistics](#). Table CW0302: Proportion of adults that cycle, by frequency, purpose and local authority, England, 2019-2020.

**Figure A.2: Trip based mode share for cycling, 3 year average 2017/18-2019/20 by borough in Greater London<sup>92</sup> (Outer London boroughs in light pink)**

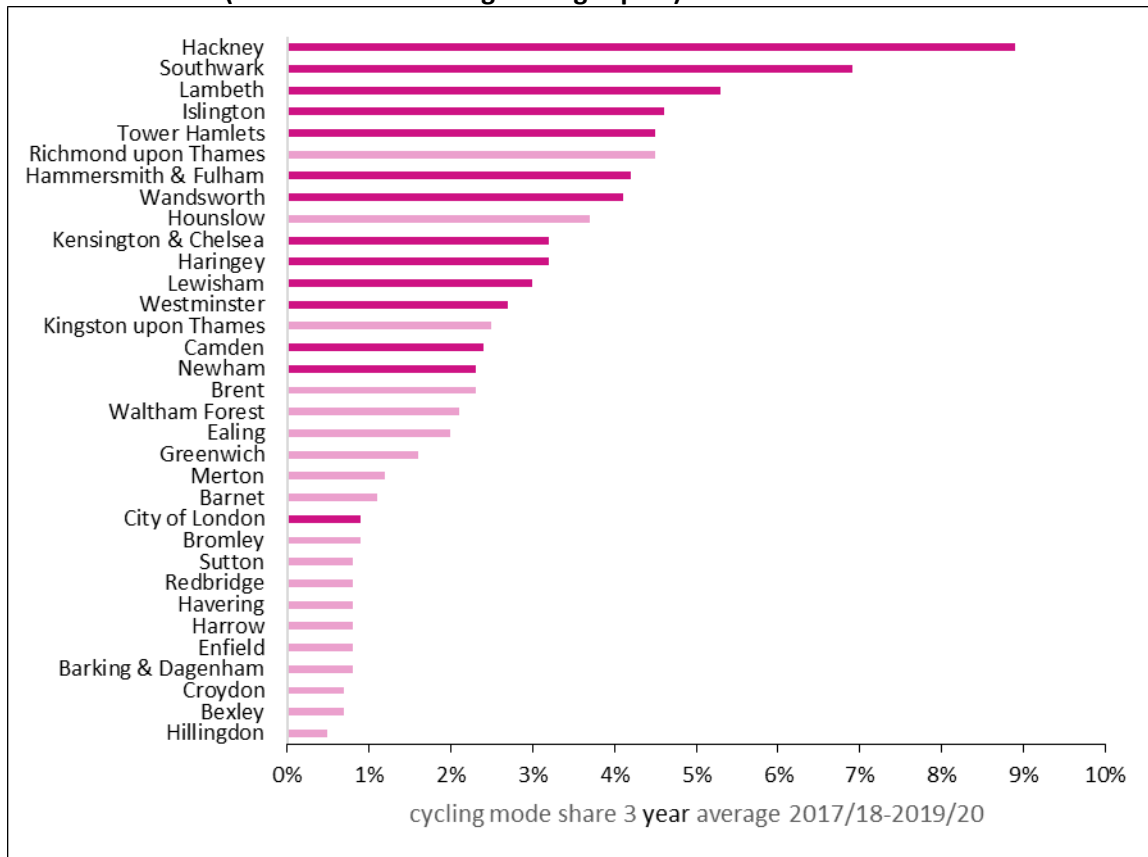
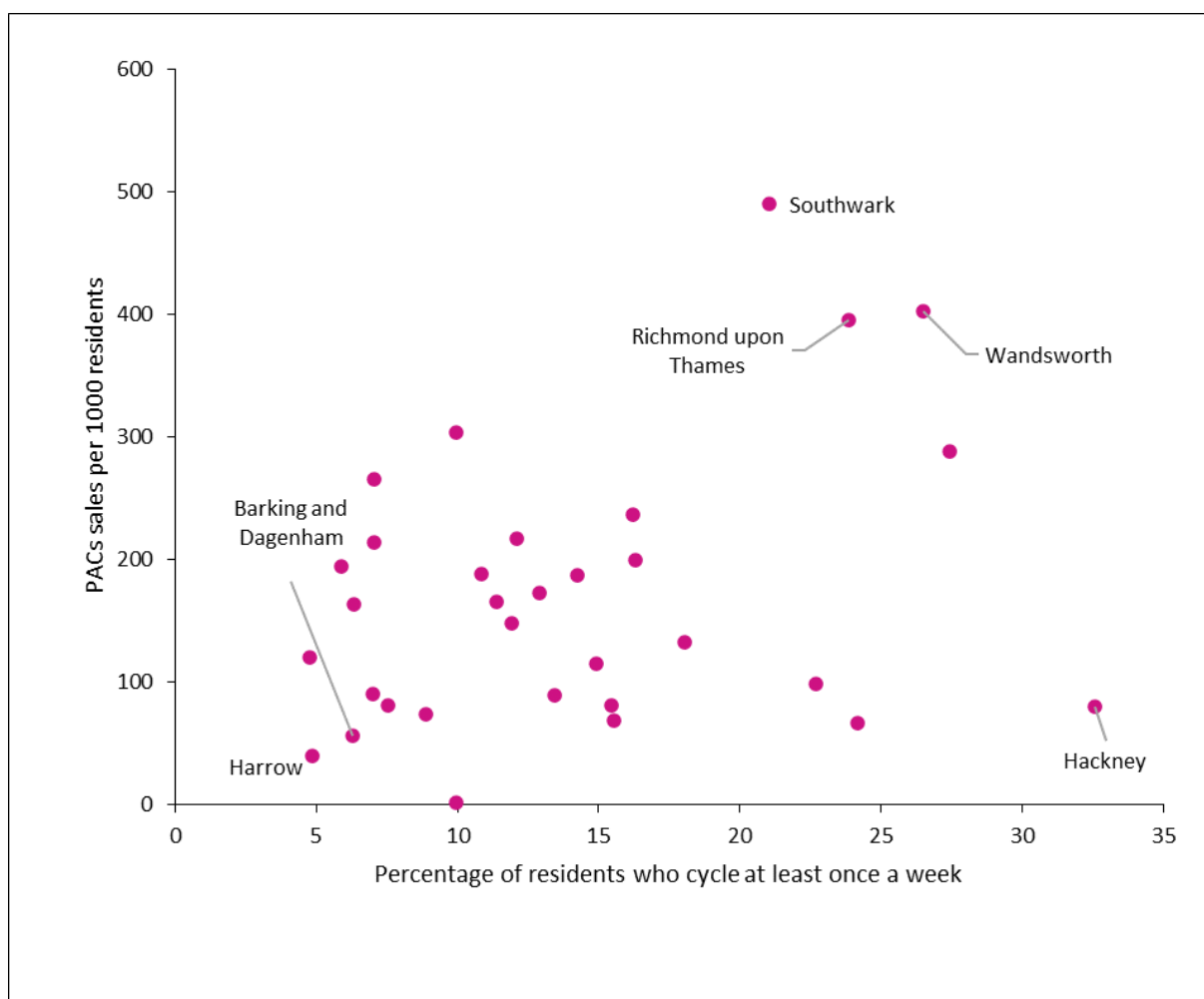


Figure A.2, based on TfL data on cycling mode share, shows that for London as a whole, around 2% of trips by residents are made by bike, but again with large variations between boroughs. The highest mode shares are in Hackney (9%) and Southwark (7%), while the lowest are in Hillingdon (<1%) and Bexley (<1%).

<sup>92</sup> Transport for London (2020) [Travel in London Report 13](#) Fig 2.21

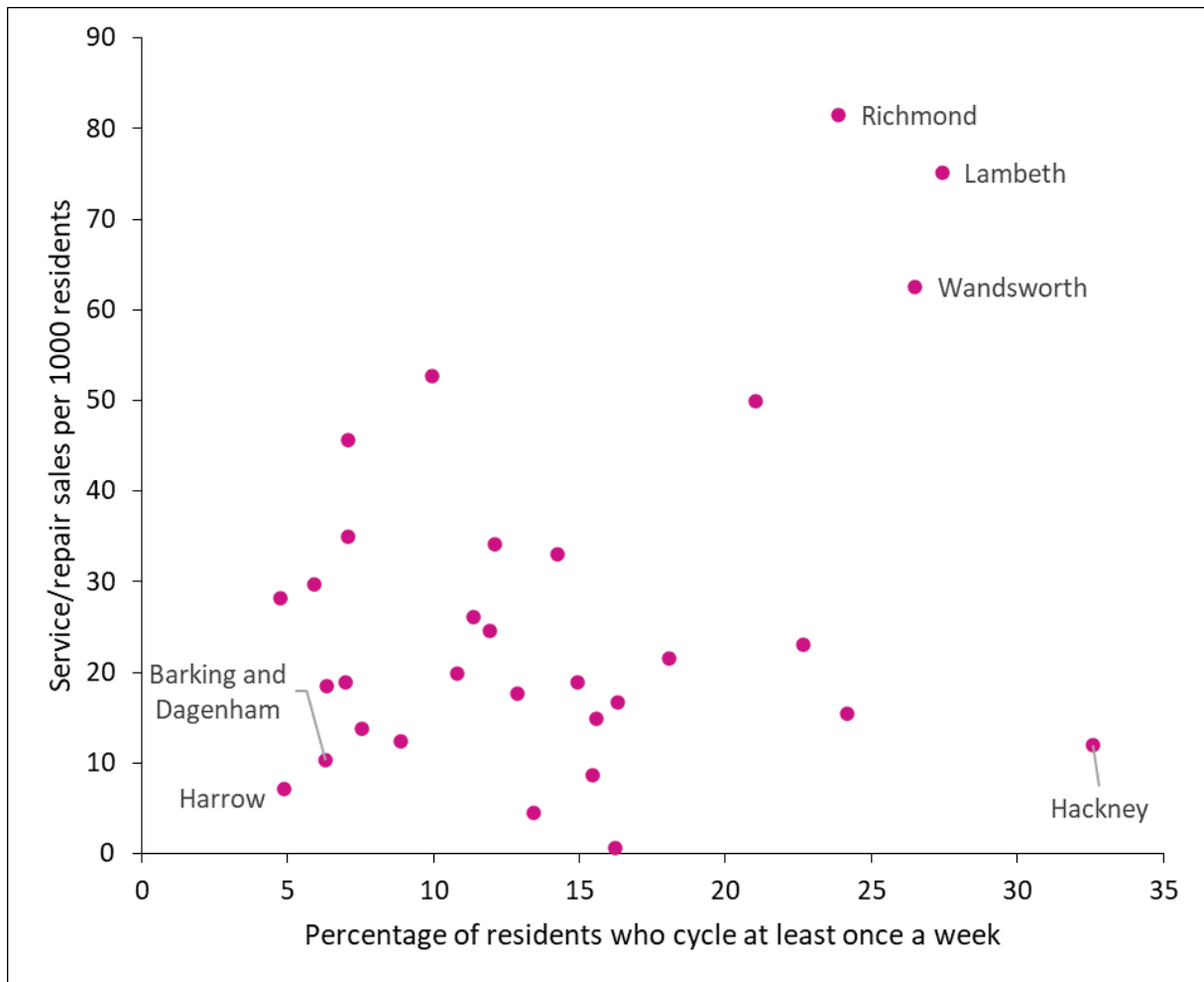
Appendix B: Charts showing correlation between cycling levels and sales of cycle parts, accessories and clothing (PACs) and services/repairs

Figure B.1: Number of sales of Parts, Accessories and Clothing (PACs) per 1000 population in 2020 and percentage of residents who cycle at least once a week, by London borough, November 2019 – November 2020<sup>93</sup>. Sales include ‘click and collect’ and instore sales only.



<sup>93</sup> Sales figures from the Bicycle Association’s Market Data Service for London. Cycling levels from Department for Transport (2021) Walking and Cycling Statistics.

**Figure B.2: Numbers of services/repairs per 1000 population in 2020 and percentage of residents who cycle at least once a week, by London borough, November 2019 – November 2020. Sales include 'click and collect' and instore sales only. Data sources as for Figure B.1.**



## Appendix C: Methodology and assumptions used to estimate economic benefits – current cycling levels

Economic benefit	Methodology	Assumptions
<b>Wider benefits</b>		
Value of loss of life	WHO HEAT tool v4.2 <sup>94</sup>	No. adults (age 20-64) who cycled at least once a week in London in 2019/20 = ~800,000 Adults who cycled 5 times a week took 480 trips/y, adults who cycled 3 times a week took 288 trips/y and adults who cycled once a week took 96 trips/y Each cycle trip = 6.8 km (London average in 2019) Economic values in Euros at 2015 prices converted to GBP in 2020 prices using a 2015 exchange rate of £1=1.3777 Euros and Bank of England inflation calculator
NHS savings	Sports England MOVES tool v2.0 <sup>95</sup>	No. adults who cycled at least once a week in London in 2019/20 in the age ranges: ~300,000 (16-30), ~386,000 (31-45), ~251,000 (46-60) and ~82,000 (61+) Some activity before starting cycling Moderate activity when cycling Each age group cycled for 0.3 hrs/day, 7 days/week
Productivity gains (reduced absenteeism)		Sickness absence rate in 2019 of 1.9% <sup>96</sup> With 252 working days/year the average employee had 4.8 sick days in 2019 <sup>97</sup> Employees who are physically active take 27% fewer sick days/y <sup>98</sup> Each cyclist takes 1.3 fewer sick days per year. GVA in London = £79,633 per filled job <sup>99</sup> 76% working age adults employed in 2019 No. adult cyclists of working age in London (20-64) = ~800,000
Pollution reduction	Pollution avoided multiplied by TAG damage costs	Estimated no. cycle trips for travel in London in 2019/20 = 120 million

<sup>94</sup> The [Health Economic Assessment Tool \(HEAT\)](#) developed by the World Health Organization estimates the mortality rate reduction and number of deaths prevented each year by cycling. The tool assumes a reduction in mortality risk for an exposure to cycling (and walking) and used a value of a statistical life to monetise the number of deaths per year prevented by cycling participation. It estimates the impacts for the age group 20-65 only because the evidence base for the health effects of physical activity on young people is not as large as that for adults, while older age groups are excluded because countries often lack mobility data for older age groups

<sup>95</sup> Based on Sports England [MOVES](#) model which shows the return on investment for health of sport and physical activity.

<sup>96</sup> ONS (2021) [Sickness absence in the UK labour market](#).

<sup>97</sup> We have used this more conservative figure rather than the higher figure of 5.9 from the CIPD. CIPD (2019) [Health and Safety at Work Survey 2019](#).

<sup>98</sup> The National Institute for Health and Care Excellence (NICE) figures quoted in Transport for London. [Walking and cycling: the economic benefits](#). Summary pack.

<sup>99</sup> ONS (2021) [Labour Productivity](#). Table B3

		30% cycle trips for travel would otherwise be made by car <sup>100</sup> 216 million driving km avoided by cycling in 2019/20 Fleet weighted emission factors for 2019 for exhaust and non-exhaust emissions of NOX and PM <sup>101</sup> TAG central damage costs for pollutants <sup>102</sup> Adjusted TAG 2010 values to 2020 using Bank of England inflation calculator
Congestion relief	Driving km avoided multiplied by TAG economic value	Avoided driving km as before TAG values for average Marginal External Costs for London (unweighted) p/km <sup>103</sup> Adjusted TAG 2010 values to 2020 using Bank of England inflation calculator
Greenhouse gas reduction	GHG emissions avoided multiplied by TAG economic costs	Avoided driving km as before CO2e emission factors from Defra for 2019 average cars <sup>104</sup> TAG values for non-traded high value of CO2e in 2020 <sup>105</sup> Adjusted TAG 2010 values to 2020 using Bank of England inflation calculator
<b>Sales of cycling products</b>		
Bike and PAC manufacture	Sales value of bikes and cycle products manufactured in London	Market and annual reports combined with additional data obtained by the Bicycle Association direct from companies
Bike and accessory retail sales	GVA of bikes and accessories sold in London	Estimated sales value from London stores in 2020 from Market Data Service with additional data
Bike repairs/services	Sales value of bike services in London	Estimated sales value from London stores in 2020 from Market Data Service with additional data

<sup>100</sup> Conservative estimate based on 38% non bike trips in London are car trips

<sup>101</sup> National Atmospheric Emissions Inventory. [Emission factors for transport](#)

<sup>102</sup> Department for Transport (2021) [TAG Data Book](#). Table A.3.2.1

<sup>103</sup> Department for Transport (2021) [TAG Data Book](#). Table A.5.4.2a

<sup>104</sup> BEIS and Defra (2020) [Greenhouse gas reporting conversion factors for 2019](#)

<sup>105</sup> Department for Business, Energy and Industrial Strategy (2021) [Valuation of greenhouse gas emissions: for policy appraisal and evaluation](#). We adopted the high values on the basis of the high priority the Mayor gives to carbon reduction.

## Appendix D: Methodology and assumptions used to estimate economic benefits – future cycling levels

<b>Inputs to AMAT<sup>106</sup></b>	<b>Assumptions</b>
Appraisal year	2021
Intervention opening year	2021
Last year of funding	2030
Appraisal period	20
LA type	London
No. daily trips without intervention	654,000 (a)
No. daily trips with intervention	4,034,000 (b)
How much of an average cycle trip will use intervention	50%
Current cycle infrastructure	on road non segregated
Proposed cycle infrastructure	off road segregated
Average length cycle trip (km)	10 (c)
Average speed cycling (km/h)	14
% otherwise use car	30% (d)
% otherwise use taxi	0%
Others	Default

- a. TfL figure for London in 2019, all cyclists
- b. Estimated figure for London in 2030 based on 14% mode share
- c. Assumed 50% increase in trip distance compared to 2019 due to e-bikes
- d. Conservative estimate based on the fact that in 2019 38% of non-bike trips in London were by car

<sup>106</sup> Department for Transport (2020) [Active Transport Appraisal Toolkit User Guide](#)