



Lime



TACKLING THE GENDER 'PEDAL GAP'

Women's Night Safety Report 2023



As a female member of Lime's leadership team, I believe that Lime's greatest achievements are reflected in the significant impact we have in moving communities to more sustainable transport options.

In my time at Lime, one of the more visible changes has been witnessing the expanding role that our service has played in helping women access cycling up and down the UK, becoming some of our most loyal riders and advocates.

Even before joining Lime, I was a passionate advocate of cycling in London. I have experienced the value and benefits that it brings to my life - for commuting, for fun or fitness, and to see friends and family. My Lime bike has been a game changer in shortening my commute and allowing me to arrive at meetings without being hot, sweaty and in cycling gear!

But this report shows that despite these benefits, women continue to cycle less regularly than men in the UK. I am proud of the role that Lime has played in starting to increase accessibility for female cycling, including making me and other women feel safe on the roads. But there is clearly more that needs to be done. We believe that companies such as Lime have a vital role to play in working with government, local authorities and industry to overcome the barriers that exist and hope this report can be a step in the right direction to closing the gender 'pedal gap'.



Sarah Binder
General Counsel at Lime





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Contributors



Opinium

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Lime

Lime is the world's largest provider of shared electric bikes and scooters. Founded in 2017, our mission is to help build a future of transport that is shared, affordable, and carbon-free. Lime has powered more than 450 million rides in more than 280 cities across five continents. Launching in the UK in 2018, Lime currently runs e-bike and e-scooter schemes in London, Milton Keynes, Salford (e-scooter only), Derby (e-bike only) and Nottingham (e-bike only).

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Executive Summary

Lime is the world's largest provider of shared electric bikes and e-scooters. Founded in 2017, our mission is to help build a future of transport that is shared, affordable, and carbon-free. Lime has powered more than 500 million rides in more than 280 cities across five continents. Launching in the UK in 2018, Lime currently runs e-bike and e-scooter schemes in London, Milton Keynes, Salford (e-scooter only), Derby (e-bike only) and Nottingham (e-bike only).

It is well known that women are less likely to cycle than men in the UK, with men making almost three times as many cycling trips compared to women (*UK Government, 2022*). In this report we set out to understand the extent of this gender disparity and identify potential solutions through the analysis of an external poll of the general public in the UK, surveys of Lime riders in the UK, and qualitative case studies from Lime riders in the UK. It produced findings concerning the barriers women face to cycling, in particular regarding travelling alone at nighttime, as well as identifying clear solutions to tackle the gender 'pedal gap' and help make cycling safer and more accessible.

Women in the UK face greater barriers to cycling, and therefore cycle less

- 9 out of 10 (91%) female cyclists face barriers to cycling.
- Women in the UK cycle almost half as often as men per month.
- Barriers to cycling create a negative cycle for some women, with over a quarter (27%) saying they lack the experience to provide confidence to ride.

Cycling at night is a particular concern for women

- Just 1 in 5 (19%) women feel safe cycling at night alone.
- Cars are the predominant choice for nighttime travel - 74% of women rank cars as their safest choice when travelling alone at night.
- Over four times as many women view cars as a safer option than cycling (82% v 19%).

The barriers identified by non-riders are also felt by existing Lime e-bike and e-scooter riders, although to a lesser extent

- 100% of female Lime riders want improvements to personal safety.

Non-riders and riders alike agreed on solutions to help them feel more comfortable riding

- Improved infrastructure such as cycle lanes and street lights.
- Integration of cycling with public transport.
- Technological advancement from operators such as Lime including a 'Follow My Ride' feature.



Recommendations

- 1** Government and local authorities should build upon existing work with businesses and active travel groups to design and deliver more cycling infrastructure and dedicated parking bays. This should be particularly focused on integration with public transport.
- 2** Local authorities should ensure there is street lighting on popular cycling routes and above parking bays. Operators such as Lime can provide data on popular routes to support this effort.
- 3** Government should work with industry, charities and local authorities to introduce accessible cycling proficiency refreshers in secondary schools.
- 4** Transport and geographical mapping applications should introduce a feature to show the most well-lit routes home for cycling and walking to support women getting home at nighttime.
- 5** Lime to explore developing new product features such as a 'Follow My Ride' feature in the UK, allowing women travelling home at night to share their journey with those important to them to provide greater personal safety.





Introduction

Cycling has numerous health and sustainability benefits, but it suffers from an extreme gender gap in many countries: women are significantly less likely to access it than men. The cycling and walking charity Sustrans' 'Cycling and Walking Index (2021)' recently showed that 71% of women in the UK never cycle in comparison to 54% of men. This increases to 74% when focused on women from ethnic minority backgrounds (compared to 57% of men respectively).

Lime is the UK's largest and most experienced shared provider of electric bikes and scooters. Yet currently, approximately just a quarter of Lime's riders in the UK identify as female, lagging the overall global average of 30%. Lime's statistics mirror the statistics from the UK more broadly (noted above), as well as many other countries in Europe and the United States (with the exception of the Nordics) that see a similar 2:1 or 3:1 ratio of bicycle trips made by men compared to women (*Pucher, J., & Buehler, R. (2008). Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany. Transport Reviews, 28(4), 495–528*). In sum, a serious gender gap in cycling exists both for the use of personal bikes as well as bikes from rental schemes.

Despite this, research from the recent *Lime in London* report (*Steer, July 2023*) showed that Lime's e-bike service in London is playing a significant role in helping women more to access cycling. Almost three quarters (73%) of female Lime riders were encouraged to cycle more after riding Lime (in comparison to 53% of male riders). Meanwhile, 71% of those asked were not regular cyclists before using Lime e-bikes and 32% of these riders were cycling after taking a break of over a year.

While these findings demonstrate progress, this report seeks to understand why a gender 'pedal gap' still exists within cycling, as well as what lessons can be learnt from the experience of Lime's shared e-bike users across the UK. It highlights the barriers to accessing cycling for women, in particular alone at night and with regard to their feelings of personal safety. It also sets out recommendations regarding the steps that can be taken by different stakeholders, including operators such as Lime, local authorities, government and the wider industry to help more women access cycling.

The findings of this report are based on nationwide external and internal survey data, supplemented by testimonials from our UK female riders and partner groups. The external data has been collected by polling agency Opinium in a survey of 2,000 UK adults. The internal data is made up of a survey of 132 Lime riders. Collectively, the survey data clearly identifies the barriers that female cyclists, including Lime riders, face accessing cycling, in particular at nighttime, and what they believe would allow them to cycle safely and more often.





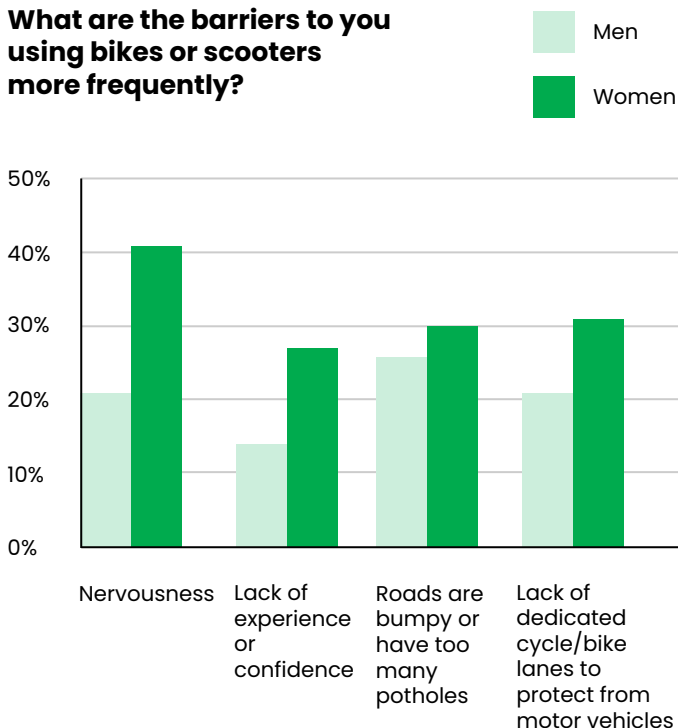
Barriers to accessing cycling for UK women

The established gender 'pedal gap' for cycling is caused by the barriers that women face when accessing cycling as a transport option. According to Opinium's polling, 9 out of 10 (91%) women who ride bikes or e-scooters experience barriers to riding, and as a result women in the UK say they are cycling almost half as often as men per month. These barriers to cycling fall into two main categories: *lack of confidence* and *insufficient infrastructure*.

1 Lack of confidence

It is evident from the findings that women feel generally less confident compared to men when cycling, in particular when engaging with traffic and other road users. The data showed that almost double the amount of women say they are nervous to cycle in traffic in comparison to men (41% v 21%), and cite a lack of experience or confidence as a reason not to ride (27% v 14%).

What are the barriers to you using bikes or scooters more frequently?



2 Insufficient Infrastructure

Infrastructure is also viewed as a key barrier to cycling for many women. In particular, the lack of dedicated cycling lanes is seen as a concern by 31% of women (compared to 21% of men). The same proportion (30%) of women also pointed to the state of the roads in the UK, in particular the amount of potholes and their uneven nature, as a barrier to cycling. The feeling of low confidence by many women identified above is likely compounded as a barrier by the limited space to cycle comfortably away from busy traffic and on the road due to insufficient infrastructure.

3 Barriers to night-time riding

While cycling may be difficult to access for women during the day, based on the data collected as part of this report, it is even more rarely seen as a safe and practical transport option at nighttime. This report asked respondents to consider cycling in the context of concerns regarding personal safety (such as risk of possible harmful or crime-related situations). From this, only 1 in 5 of female respondents (19%) viewed cycling as a safe transport option at night.



Infrastructure was again cited as a factor when assessing the safety of cycling at nighttime. Nearly half of female riders (46%) highlighted poorly lit roads as a barrier to cycling alone at night, as well as cycle routes being located in isolated and quiet areas (41%). These women also identified potential harassment they can experience from other road users as a nighttime barrier to cycling and threat to personal safety (36%).

Use of shared services such as Lime's e-bike schemes also generated concerns, with 71% of women saying that they would not hire a vehicle at night if they had to park too far away from their final destination.

Case Study: Cycle Sisters

Cycle Sisters aims to inspire and enable Muslim women to cycle. Running since 2016, they have become the UK's largest Muslim women's grassroots cycling organisation. They have developed a successful model of volunteer-led cycle groups offering a safe and inclusive space for Muslim women to discover cycling without having to compromise cultural or religious values.



Muslim women are among the least represented communities in cycling and can experience a number of barriers including safety fears around racism and Islamophobia, lack of role models and negative cultural attitudes towards cycling. Many Muslim women do not feel comfortable joining mainstream cycle groups which are often male-dominated, nor feel safe to cycle independently on the roads.

Cycle Sisters supports Muslim women to overcome these barriers through a combination of regular led social rides and cycle lessons, which develop skills and confidence and create a community of women who support each other. They have groups covering 10 London boroughs, run by a team of nearly 90 trained female volunteer Ride Leaders from local Muslim communities, and more than 1500 women are part of their network.



What transport options are women choosing at nighttime?

Our research indicates that women do not feel cycling is a practical and accessible option for travelling at nighttime due to the broader barriers to cycling such as confidence and insufficient infrastructure, as well as wider concern regarding their personal safety. So what transport modes do women regard as safer alternatives at night time?

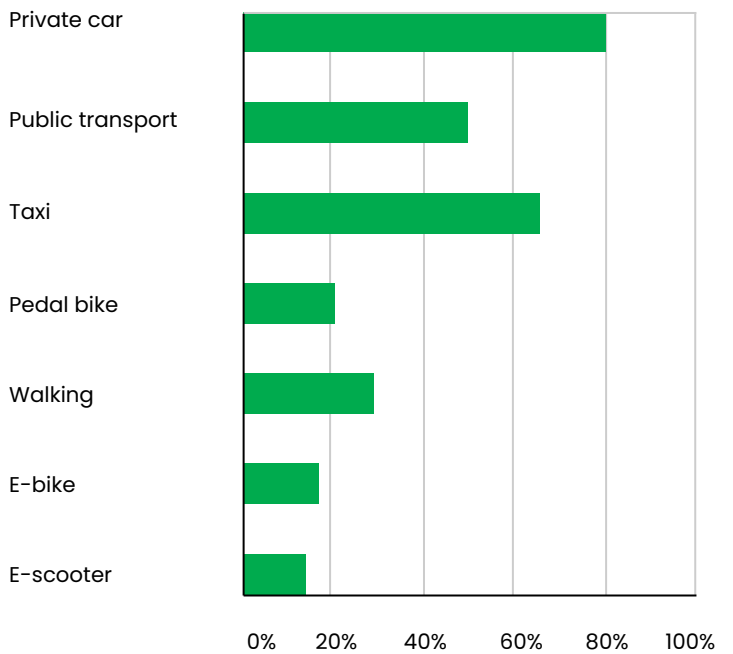
In the Opinium poll, women were asked to rank **one** transport option they deemed safest to establish what they were utilising at night, specifically if travelling alone. One choice was clearly preferred, with 74% of women deeming their own private vehicle as the safest option. The second highest ranked option by women was public transport at just 6%. It is also worth noting that only 50% of female respondents viewed public transport as a safe option for travelling at night alone more broadly (in comparison to 65% of men).

When asked to rate the safety of different modes, four times as many women viewed cars as a safer option than cycling (82% vs 19%). Poorly lit roads (46%), isolated cycle routes in quiet areas (41%), antisocial behaviour (36%), and fear of harassment from other road users (34%) were uncovered as the main deterrents for female cyclists at night.

These findings reflect that safety concerns are deterring women from using active and sustainable forms of transport in favour of private car use. It is clear that the concern for personal safety, especially when dark, adds another layer to the wider barriers to women accessing cycling as a transport option.

Thinking about your personal safety when travelling alone at night/after dark, how safe do you believe the following modes of transport are or would be?

(Female answers only)





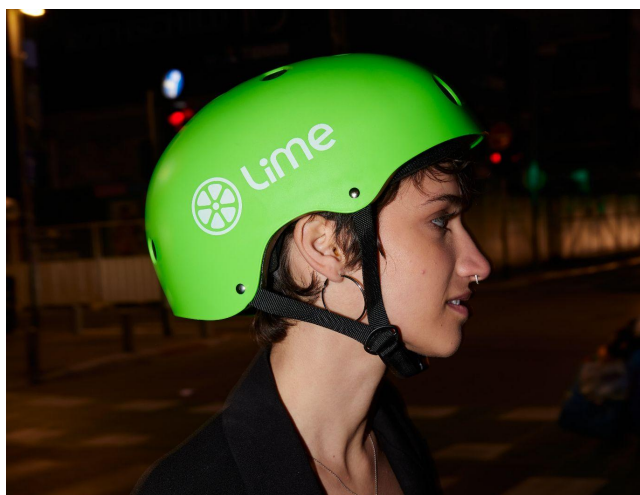
What makes cycling a preferred option for some women at night?

Benefits to cycling

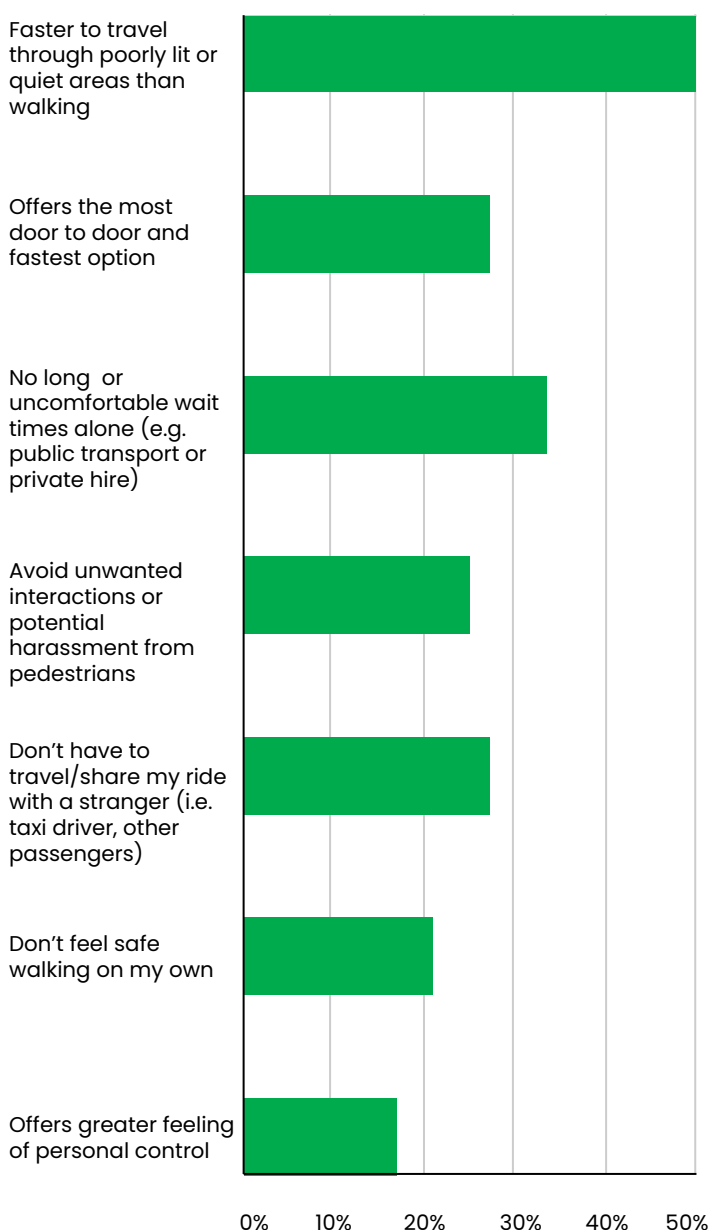
Despite the preference to use personal cars when travelling alone at night, there are one fifth of women (19%) from the Opinium poll who do see cycling as a safe transport option in this scenario. We asked these female cyclists why this was.

The majority raised the benefits of speed (vs other modes) and personal freedom. Half (50%) of female cyclists said that it is faster to travel through poorly lit or quiet areas than walking, while 33% said that through cycling they avoided long or often uncomfortable wait times alone for public transport or private hire motor vehicles.

Another motivation was the solitary nature of cycling when travelling alone, with 27% of those asked citing the fact that they do not have to travel with strangers (e.g. on public transport or taxi drivers). While 25% highlighted that cycling allowed them to avoid unwanted interaction and potential harassment from other pedestrians.



Why do female riders feel safe cycling alone at night?





More women would see cycling as an option at night if barriers are overcome

Despite the minority of women deeming cycling as a safe transport option alone at night, the findings do demonstrate that it could become a preferred transport option if the barriers identified could be overcome. When asked, over half of women who cycle (53%) think that micromobility offers a good alternative at night when public transport is closed and 67% see it as a cheaper option in comparison to ride hailing. Of the female cyclists surveyed, 58% would consider making more journeys at night and 63% wish there were more measures in place to help them travel alone safely at night.

Shared rental e-bike schemes can help increase access to cycling at night for women

When discussing cycling as a transport option, it is important to consider that Opinium's polling found that although 89% of cyclists have access to a personal pedal bike, only 36% have access to a rental bike hire service, such as Lime. Therefore, if a woman lives in an area that does not have a rental bike hire scheme, unless she has access to a personal pedal bike, she will likely not be able to choose cycling as an option for travelling home at night at all. To help more women experience the benefits of cycling, more UK cities and towns should consider welcoming shared rental schemes.





What do Lime riders think?

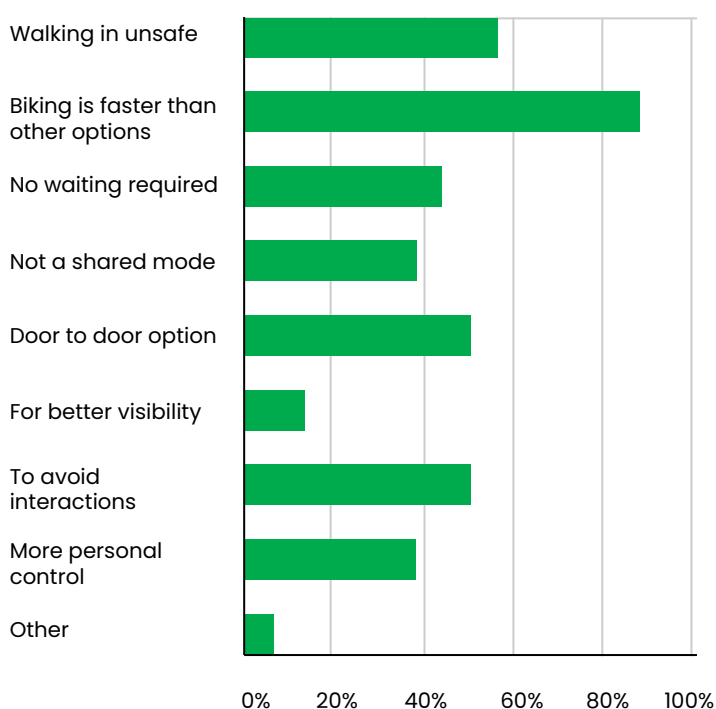
Internal data

To further understand the barriers to women cycling at night, Lime asked its own riders for their input.

We asked riders about their perceptions of personal safety at night alone on different transportation. We found women prefer personal cars to other options, with nearly 9 in 10 (86%) of female Lime riders selecting that they felt “very safe” or “fairly safe” using a car. On the other end of the scale, women felt least safe walking alone, with only one third (36%) of Lime riders feeling safe on foot at night, compared to 58% of men. However, over two thirds of women feel safe using public transport, taxi or ridehail, and a Lime e-bike (68%) alone.

Why women use Lime at night*

**Only women who said they felt very safe or fairly safe using a shared e-bike or e-scooter at night were asked in this survey*



Interestingly, there is only a small difference in positive personal safety perceptions between cycling with Lime (68%) and driving (86%) for female Lime riders, in comparison to the external polling data. It suggests that Lime riders are more likely to view cycling as an option that offers them personal safety at night compared to the general female population: over triple the proportion of female Lime riders (68%) said they view cycling as a safe option at night in comparison to the UK women surveyed externally (19%).

For the women who felt comfortable riding a Lime e-bike at night, we asked what made e-bikes help them feel safe. The most common reason is because they view it as fast (88% of women who feel safe riding at night), because walking isn't perceived as being as safe (56%), and it allows them to avoid unwanted interactions (50%) as a door-to-door option (50%). However, female Lime riders were unwilling to walk long distances alone to access parking for rental schemes like Lime at night, with nearly two thirds (63%) stating that they would only be willing to walk a maximum of 3 minutes between a parking location and their destination, nearly double the number of men who said 3 minutes was their maximum walking time (35%).

Kitty, London

“I commute to work as a nurse for the NHS using Lime. I have to park the bike a ten minute walk across the park [to my flat]. The park isn't well lit and there have been lots of occasions where I have felt scared. I would like to [be] able to park my lime bike nearer to my flat. It would make my commute so much safer.”



Rider testimonials*

Personal stories from our riders also mirror the findings from the user survey data. They show that those who do utilise Lime's service highlight benefits to commuting, health and well-being as well as enhanced personal safety when travelling at night.

Many felt Lime e-bikes were safer than other transport options, such as public transport, private hire and walking. Ella said that "Lime ... helps me get home safe late at night in areas where I historically would have had to walk. This has helped increase my reassurance that I'll get home safely", while Amelia said that Lime's service "makes me feel safer than walking or getting the tube late at night". Maria also highlighted that Lime allows her to "get to places safely at night as a single woman without the risk of using cabs or night public transport".

** Names have been changed due to confidentiality purposes*

Some women also felt that Lime gave them independence on their journey home. Abigail said that with Lime she will "always have a way home, especially at night", while Raelynn stated that the e-bikes "give me the independence to get around London whilst feeling safe. As a woman, knowing I can get a Lime bike gives me the freedom and security to journey on my own".

The data from our riders show that women who use Lime e-bikes for travelling home at night feel that there are benefits to their personal safety.





“

Since discovering Lime bikes in October [2022], I have continued using them multiple times per month, mainly to get home at the end of the evening when the wait for the bus is too long and cold!

The first time I took a ride on a Lime, I was persuaded by my boyfriend to download the app so we could get home faster than the bus, or by walking. I had no idea it would be so much fun! The electric boost makes you feel like a little kid again, and a boost of happiness in my day is always welcome!

Riding on Lime helps me to feel much safer getting around London. I can get home quicker, and it takes away the uncomfortable waiting late at night at bus stops or walking home. Even though I tend to walk back on well-lit roads, I still feel more exposed at night than otherwise.

Not only does it feel safer and quicker, but in general I'd rather take a Lime vehicle than a taxi or public transport since it's cheaper. I would recommend Lime to all new riders!



Name: Joanna

Age: 30

Lives in: Tower Hamlets

Occupation: Barrister



For me, Lime e-bikes help me to feel safe travelling around London as a woman, especially at night.

Taking a bus can be time-consuming, and the alternative of walking through eerie streets is far from ideal as I don't always feel safe alone in the dark.

Many aren't aware of how common it is for women and other vulnerable groups to feel 'on alert' when walking alone at night based on the worrying statistics in London and the UK - it is exhausting. Cycling on Lime feels so much safer, and means I often get to my destination much quicker too.

I first used Lime last summer to get to a birthday picnic with a group of friends on a sunny day. Now, I use Lime bikes weekly to travel around London for social occasions - many after dark - like going to a friend's house, or one of my yoga classes. Lime is a great way to get around during my week.



Name: Clare

Age: 28

Lives in: South West London

Occupation: Research



Overcoming barriers: the solutions to making cycling safer at night for women

This report identifies substantial barriers to women accessing cycling, in particular feeling safe enough to see it as a practical transport option alone at nighttime. To overcome these barriers, women were asked what would make them feel safer cycling at night. There were broadly three categories of potential solutions: *infrastructure, integration with public transport and technological innovation.*

On infrastructure, there were strong calls for more dedicated cycle lanes with 67% of female cyclists saying that this would make them feel safer while cycling alone at night, while 59% wanted to see better lit streets for riding. For rental e-bike services, 69% of female cyclists wanted better lit parking areas and 62% highlighted the need for more parking areas near their home address as well as final destinations (to reduce walking time alone after dark).

There was also a focus on integrating cycle parking with public transport hubs and stations, with 68% of those asked calling for further cycle parking in these locations. Often shared e-bikes and e-scooters are seen as part of 'last mile' journeys and used in connectivity with other transport options, therefore it is reasonable to expect parking at these hubs.

Finally, the women surveyed were strongly in favour of technical solutions to improve access to cycling at night alone. One example of this would be a function in 'maps' phone applications such as Google Maps, Apple Maps and CityMapper that highlighted the most 'well lit route home' for cycling. This was heavily supported by 66% of women asked, and likely driven by the fact that the quiet cycling routes suggested by 'maps' in the daytime turn out to be quiet or badly lit routes at nighttime in comparison.



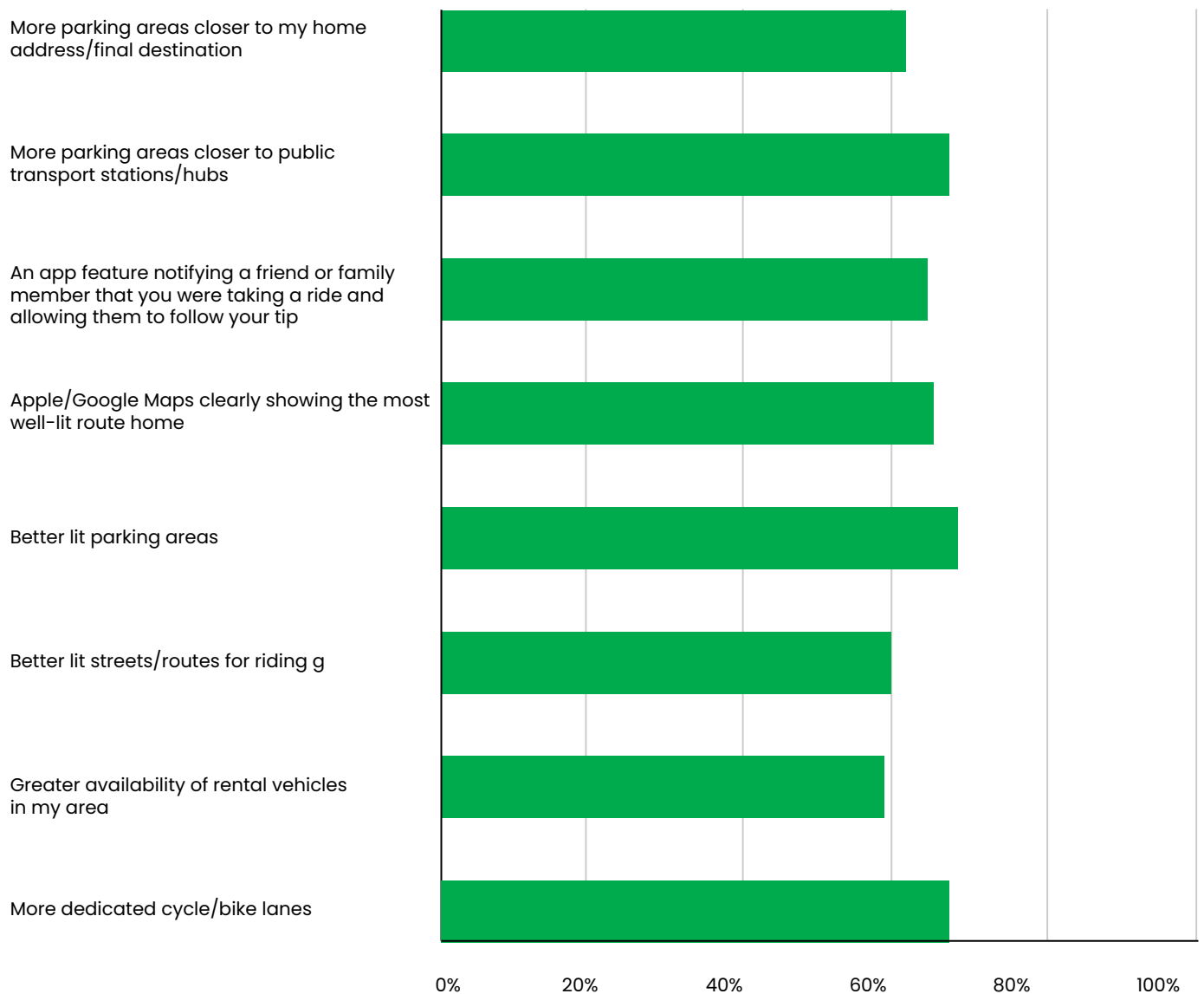


When asked what shared micromobility operators such as Lime could do to overcome these barriers, they were in favour of having greater availability of rental vehicles by their home address (59%), and features from operators that allow them to share their ride with close friends and family (65%).

When it came to the female Lime riders surveyed, every single respondent said that they would feel safer at night with improved cycling infrastructure.

Female Lime riders also highly desired a number of other safety improvements, including increased density of vehicles close to them (96% of women said this would make them feel safer at night), more parking at home and near transit (both 91%) as well as a 'Follow My Ride' feature provided by operators (91%).

To what extent would each of the following make you feel personally safer when riding a rental e-bike or e-scooter at night/after dark, if at all?





Recommendations & conclusions

This report has found that women face significant confidence, infrastructure and innovation barriers to accessing cycling as a transport option, in turn creating a gender 'pedal gap' in the UK whereby 9 in 10 women experience barriers to accessing cycling and only 1 in 5 female cyclists feel safe riding alone at night.

These barriers increase at nighttime with concerns for personal safety dictating heavy reliance on personal cars above other transport options. Most women do not see cycling as a safe and practical transport alternative at nighttime when travelling alone.

However, evidence from the women who cycle as well as female Lime riders show that there are benefits that can be unlocked from encouraging cycling as a transport option for commuting, running errands, visiting family and more, both in the day and night. The challenge is how can these barriers be overcome for more women to access these benefits?

Lime has outlined five recommendations to get more women cycling by overcoming the barriers this report has outlined.





Insight

67% of female riders would feel safer with more cycle lanes

68% of female riders would feel safer with more cycle parking in public transport hubs and stations

Improving cycling infrastructure and integrating this with transport hubs such as train stations will provide further spaces for women to cycle away from congested traffic. Adding further parking spaces and bays will also reduce the need for women to have to walk at night far to access transport options close to their homes or final destinations, helping them feel safe at the start and end of their rides.

Recommendation

Government and local authorities should build upon existing work with businesses and active travel groups to design and deliver more cycling infrastructure and dedicated parking bays. This should be particularly focused on integration with public transport.

69% of female riders would feel safer with better lit parking spaces for cycling

71% of female cyclists would not hire a rental e-bike at night if they had to park too far from their final destination

Poorly lit streets, public spaces and parking infrastructure were highlighted as concerns for the majority of women. This is especially concerning in winter months when it gets dark early. While there are understandable financial constraints to investing in significant street lighting from local authorities, operators such as Lime can provide data on popular cycle routes as well as suitable locations for parking infrastructure in well lit locations so that this investment can be targeted efficiently.

Local authorities should ensure there is street lighting on popular cycling routes and above parking bays. Operators such as Lime can provide data on popular routes and parking locations to support with this.



Insight

41%

of women say they are nervous to cycle in traffic

27%

of women cite a lack of experience and confidence as a reason not to ride more often

It is evident that a lack of confidence is a substantial barrier to women cycling. An increased focus on cycling proficiency aimed at girls aged 11-16 in schools would help address this.

Recommendation

Government should work with industry, charities and local authorities to introduce accessible cycling proficiency refreshers in secondary schools.

66%

of female riders would feel safer with a 'well lit route home' map feature

Many transport and mapping applications have features where the user can select the 'quiet routes' to avoid cars when cycling. However, these routes are often poorly lit at night and therefore not considered safe options for women travelling home. Creating a feature which shows the best 'well lit' route to take when journeying from A to B would help women be able to travel home safely at night. Operators such as Lime can partner with such applications to support this development.

Transport and geographical mapping applications should introduce a feature to show the most well-lit routes home for cycling and walking to support women getting home at night time alone.

65%

of female riders would feel safer with an in-app feature from operators allowing them to share their ride location and progress with close friends and family

Similar to ride-hailing in-app technology, this will allow women who are travelling to a location on a rental vehicle to share their journey with family and friends using the vehicle's GPS technology.

Lime to explore developing new product features such as a 'Follow My Ride' feature in the UK, allowing women travelling home at night to share their journey with those important to them to provide greater personal safety.



A commitment from Lime

It is important to recognise that boosting the numbers of women accessing cycling cannot be achieved without substantial work to overcome the barriers and concerns for personal safety indicated in this report.

Lime is committed to driving positive change and believes these five recommendations will help to close the gender 'pedal gap'.

By working together with government, local authorities and other operators, we can all help increase cycling levels amongst women. Lime also believes that setting targets can provide accountability and spur action. With this in mind, *Lime will aim to increase the percentage of female riders in the UK from 25% to 30% by 2025, as an intermediate step towards full gender parity and bringing the UK in line with the global average.*



