

Welcome



UNIVERSITY OF
BIRMINGHAM

A Climate Conscious World

In a climate-conscious world, the way we commute to work is more crucial than ever. Many of us aspire to switch to greener alternatives, whether by walking, cycling, or using public transport. But is this switch truly as simple as it sounds? Ongoing research at the University of Birmingham is looking into the commuting experiences of staff and students travelling to campus from across the West Midlands Combined Authority (WMCA), shining a light on the diverse experiences and the challenges faced in making the transition to more sustainable alternatives. This leaflet presents some of our latest findings.

The Method Behind the Maps

In assessing the "appeal" of a journey, several metrics can be considered, including duration, cost, comfort, and accessibility. For the purpose of this research, we focused solely on journey duration as our primary measure as a universally significant factor in the decision-making processes of those travelling.

In particular, we use a metric called the Modal Duration Ratio (MDR); a simple comparison metric indicating how much longer one mode of transport takes over another for the same journey. For example, if public transport has an MDR of 3 compared to driving, it means commuting via public transport takes three times as long as driving.

MDR

- Less than 1
- 1 to 2 times as long
- 2 to 3 times as long
- 4 or more

Journey Duration

- Less than 20 mins
- 20 - 40 mins
- 40 - 60 mins
- 60 mins or more

What Next?

While the insights from this initial research are valuable, they remain inconsequential without tangible changes in our transport systems. To strengthen our findings, students at the University are exploring additional datasets, factoring in costs, socio-economic circumstances, comfort, and accessibility requirements. By acknowledging these nuances, we aim to build a case supported by both quantitative and qualitative evidence, to pinpoint the areas in the West Midlands that require improvement the most.

Get Involved

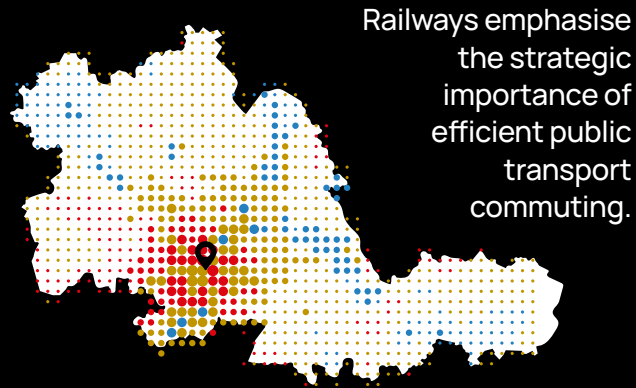
We value your input on travel patterns around Birmingham! Share your thoughts, explore all the interactive maps, or contact the researchers by scanning the QR code below.



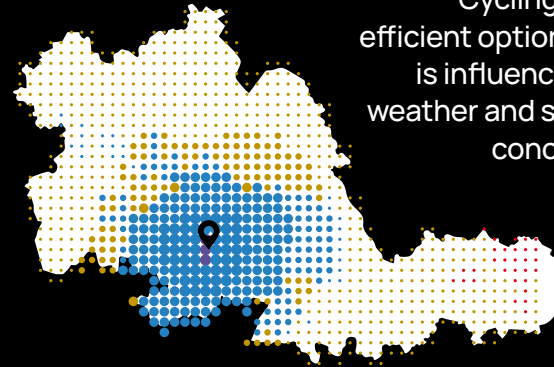
Acknowledgements

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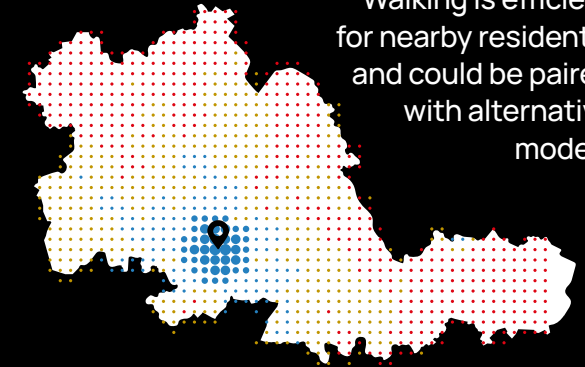
Journey to Old Joe



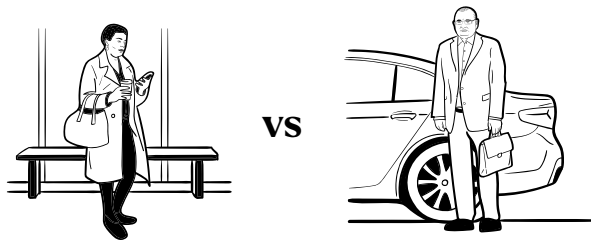
Railways emphasise the strategic importance of efficient public transport commuting.



Cycling is an efficient option, but is influenced by weather and safety concerns.



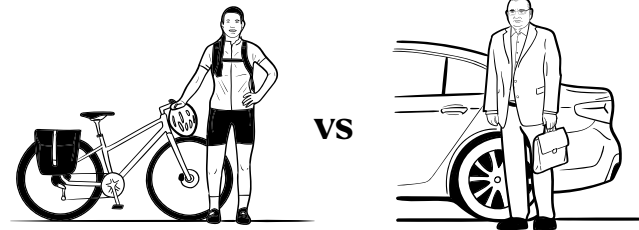
Walking is efficient for nearby residents, and could be paired with alternative modes.



Public Transport vs Car

When comparing public transport to driving, larger clusters of dots around the University indicate reasonable commute times via public transport, particularly for those near transit hubs.

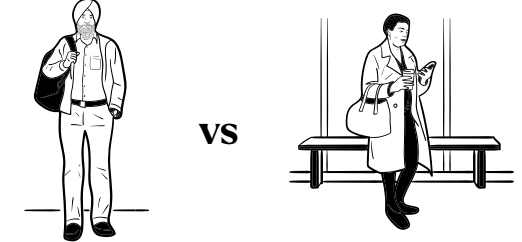
However, many journeys take over three times longer than driving, evident from the sea of red and yellow dots. Interestingly, blue dots (where public transport is comparable to driving) are located further away, near main railway lines. This creates a paradox: public transport becomes more appealing in terms of journey time the further away you are. This pattern highlights the strategic value of rail lines for sustainable commuting, while showing that Birmingham's local bus network lacks competitiveness. Expanding favourable transport zones requires improvements in bus availability and routes.



Cycling vs Car

Cycling presents a competitive alternative to driving, especially around the University, where purple dots show faster commutes for cyclists at close distances. As distances increase, a predominantly blue area reveals cycling remains appealing, generally being at most twice as slow as driving. The large dots indicate low journey times, highlighting cycling's efficiency for commuting and its viability for broader areas with improved cycling infrastructure.

However, cycling's practicality extends beyond speed; weather and safety are critical. Adverse weather can deter cycling without proper gear and sheltered routes. Safety concerns, particularly on roads without dedicated lanes, can also discourage cyclists. Well-planned infrastructure, including protected lanes and traffic-calmed roads, is essential, emphasising the need for urban planning that fosters cyclist-friendly environments and promotes year-round cycling.



Walking vs Public transport

For nearby residents, walking often stands out as a suitable alternative to public transport, as demonstrated by the blue MDRs, which show that walking is at most only twice as slow as using public transport. This highlights walking as an efficient and attractive mode for short distances, offering the benefits of simplicity, cost-effectiveness, and sustainability.

However, walking is not always an option for those who live further away from the University. The practicality diminishes with increased distance, making other modes of transportation necessary for commuters living at greater distances. For these individuals, considerations such as time and convenience often make public transport or cycling more fitting alternatives. This underscores the need for a diverse range of commuting options to accommodate varied distances and preferences.