Introduction

Welcome to the sixth issue of TfWM's quarterly research and publication review, which is produced by the Policy, Strategy and Innovation Directorate.

Our directorate ensures that WMCA’s transport policies and strategies are informed by robust evidence and research. We work with industry partners across the private and public sector to promote and engage in the research and development that drives forward transport innovation. Through our efforts, we aim to shape the development and management of the transport system to achieve better outcomes for the West Midlands.

Our quarterly publications provide a selection of highlights including:

- The development of insight tools that will help us to understand the integrated transport system better;
- TfWM’s primary research and insights; and
- Relevant research from others - close to home and around the world.

Links for further reading, contacts and research opportunities are also provided.

Contents

- Travellers Importance and Priorities Survey 2019 ................................................................. 3
- Climate Change and the Transport Policy Knowledge Gap ...................................................... 7
- Enhanced Transport Analysis for the West Midlands ............................................................. 9
- Real Journey Time GVA ........................................................................................................ 11
- Cycle Counters Feasibility Study ......................................................................................... 13
- Bromsgrove Station Relocation and Service Enhancement Study ........................................ 15
- Comparing the West Midlands Workplace Population Growth and Decline from 2001 to 2011 .......... 17
Travellers Importance and Priorities Survey 2019

A survey was conducted between July and October 2019 to gather insight about public perceptions and attitudes towards transport. To allow this data to be used more comprehensively, the research population were sampled and analysed according to Experian’s Mosaic Groups in the final analysis to obtain a richer understanding of the West Midlands traveller. A summary of Mosaic Groups can be found on page 6.

During this study, 1000 household interviews were conducted across the WMCA region. As well as being questioned about their transport perceptions and attitudes, interviews were also conducted to quotas set on the basis of the key Mosaic groups found in the West Midlands. The following pages show the main opportunities and challenges that were identified following analysis of this research, and key conclusions from this study are listed below.

- The Rental hub and domestic success groups were most interested in e-bikes and bike share - so there may be potential for marketing to these groups in particular;
- A quarter of respondents were regular public transport users - in particular young people from Rental Hub and some of the older profile groups so there is an opportunity to do more to ensure these groups are not deterred;
- The most sought after technology amongst respondents - particularly those from Rental Hub - was apps which estimate time of arrival based on actual travel conditions or to see where bus/train actually is;
- Respondents were most likely to be aware of App based taxi services such as Uber as well as car rental services as opposed to bikeshare and other services. This will likely present a challenge in years to come and it is imperative that we ensure that people see mass transport as the most ideal mode;
- Significant proportions of the West Midlands population remain heavily dependent on private car use. 1/3 would consider reducing car use to get healthier and 1/5 to improve the environment or save money. This study may enable us to understand who best to market schemes such as mobility credits and other car reduction incentives at;
- Only 2% owned a hybrid or electric vehicle - and most of these respondents belonged to the Prestige Positions group. This was mainly due to high purchase costs. Unsurprisingly the more affluent Prestige Positions and Domestic Success groups were also most likely to consider purchasing electric/hybrid vehicles. It is therefore likely that those from less privileged groups who drive may be most likely to lose out so it is critical that we strive to alleviate this by providing good, reliable alternatives across the entire region; and
- The main transport priorities amongst all respondents were lower public transport fares and reducing traffic congestion but in general most respondents did not believe transport to be the main issue in the region.
Challenges

37% have never considered bus travel.

92% of prestige position and 80% domestic success have access to a car they can drive.

Single tickets are most common amongst less affluent groups: this is more expensive in the long term.

Only 1/5 respondents are aware of bikeshare.

53% felt that travel was somewhat limited and 34% very limited by their disability.

Amongst users of public transport, the desired modal shift tended towards the car 37% for rail users.

71% live in car owning households.

Only 3% drove more this year than last. Driving was the most people were least likely to shift from (Only 22%).

Very limited interest in reducing the number of household vehicles. (5% interested in car share; 6% for mobility credits).

Only 2% of respondents own a hybrid or electric vehicle.

35% said nothing would encourage them to buy one. The main reason was due to high cost.

Stated road investment as their main priority for transport funding.

40%
Opportunities

- Senior Security most likely to use bus regularly for shopping
- 45% use a smartphone
- 30% use apps for live travel updates
- 38% would like text alerts informing of public transport disruptions
- 62% of rental hub would use a real-time journey app
- 1/3 would reduce car use to get fitter
- Youthful rental hubs are less reliant on car ownership despite many having a driving license
- Nearly 50% of rail users would like to use contactless
- 30% would like capped fares introduced
- 5% of respondents walked more last year than the year before
- 23% prefer bus travel to other modes

Transport for West Midlands

Domestic success and rental hubs were interested in e-bikes and bikeshare

High Clean Air Zone Awareness

- Support outways CAZ opposition
- Most popular transport funding priorities are keeping fares low and reducing congestion
- 21% would buy an electric vehicle if they could

ENCTS pass is very well utilised by disabled people.

1/5 would reduce car use to improve the environment and/or save money

Domestic success (30%) and aspiring homemakers (28%) were most likely to purchase season tickets

More affluent groups are interested in using parking apps
MOSAIC groups

PRESTIGE POSITIONS  
Aged: 65-69  
Income: £100k-£149k  
High Value detached homes  
Married  
Usually supporting students/older children

DOMESTIC SUCCESS  
Aged: 41-45  
Income: £70k-£99k  
Upmarket Suburban  
detached homes  
Families with 2 children  
High internet use  
Own new technology

ASPIRING HOMEMAKERS  
Aged: 31-35  
Income: £40k-£49k  
Semi-detached homes (owned)  
Families with 2 children  
Full-time employment  
Starter salaries

SUBURBAN STABILITY  
Aged: 55-60  
Income: £40k-£49k  
Semi-detached homes (3 bed)  
Long term address  
Families with 1 child  
Some adult children at home  
Research on internet

RENTAL HUBS  
Aged: 20-30  
Income: £20k-£29k  
Rented flats  
Singles and house share  
No Children  
Urban locations  
Young neighbourhoods  
High smartphone use

URBAN COHESION  
Aged: 56-59  
Income: £20k-£29k  
Owned terraced house  
Single parent families  
1 child  
Multicultural  
Sense of community

MODEST TRADITIONS  
Aged: 55-60  
Income: £20k-£29k  
Owned Terraced houses  
Mature age  
Children grown up  
Modest income

FAMILY BASICS  
Aged: 31-35  
Income: £15k  
Council accommodation  
3 children  
Squeezed budgets  
Limited resources

TRANSIENT RENTERS  
Aged: 18-25  
Income: £20k-£29k  
Renting and house share  
Single  
Private renters  
Low length of residency

SENIOR SECURITY  
Aged: 75-80  
Income: £15k  
Homeowners  
Elderly couples and singles  
Bungalow  
Additional pension above state  
Dislike technology  
Low mileage drivers

MUNICIPAL CHALLENGE  
Aged: 55-60  
Income: £15k  
Council housing  
Single  
No Children  
Challenged neighbourhoods  
Low income/unemployment

VINTAGE VALUES  
Aged: 76-80  
Income: £15k  
Council accommodation  
Eldery  
Living alone  
Need support  
Low technology use

Credit and References

This data was produced by the Human Intelligence Team. Please contact Sarah Bayliss, Human Intelligence Manager for further information (sarah.bayliss@tfwm.org.uk). Graphics were created by Emily Perry, Transport Strategy Researcher.
Climate Change and the Transport Policy Knowledge Gap

There is broad international consensus that we could have just 10 years left to limit catastrophic climate change. The average global temperature is set to rise by 1.5ºC above pre-industrial revolution levels by 2030 if greenhouse gas (GHG) emissions are not seriously reduced. If global temperature rises are not limited to well below 2ºC there is a risk that positive feedback processes will accelerate the release of GHGs from the Earth’s natural stores, leading to sustained global warming which is likely to result in catastrophic impacts to life on Earth. These will include direct impacts on the West Midlands climate as well as impacts on life and business as a result of wider domestic and global climate change.

Climate Targets

The UK Government and WMCA are both committed to taking action to prevent these global temperature rises (in line with the Paris Agreement, an international agreement on climate change action). The UK’s Climate Change Act 2008 requires Government to eliminate net GHG emissions by 2050 and to set carbon budgets to achieve this goal. The requirement to eliminate net GHG emissions was introduced following an amendment to the previous target (which was to reduce GHGs by 80% from baselines) in 2019.

A WMCA area target of achieving net-zero carbon emissions no later than 2041 was approved by the WMCA Board in July 2019, with interim targets based on a 2018 baseline of 36% reduction by 2022 and 69% reduction by 2027. There is also a corresponding WMCA carbon budget requiring net cumulative CO₂ emissions up to 2100 to stay below 126MtCO₂. Whilst Government has legal duties to reduce GHG emissions, local government does not have duties to reduce GHG emissions (unlike local duties to reduce air pollution), however, it does have duties relating to transport, land use, and minerals and waste, which have a fundamental impact on carbon emissions.

Source sector analysis shows that most of the UK’s reductions in GHG emissions over the last 20 years have been due to reductions in the energy sector. The transport sector is now the biggest contributor to national and local GHG emissions and has remained relatively unchanged over the last 30 years (except for a dip during the Great Recession starting in the late 2000s).

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The Transport Policy Knowledge Gap

The vast majority of national and local transport sector GHG emissions are from surface transport, and the majority of these emissions are attributable to passenger car travel (the dominant mode of passenger transport in the UK and WMCA). LGV and HGV emissions are also significant with sustained

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growth of LGV emissions since 1990. Provisional analysis by the Tyndall Centre for Climate Research suggests that the UK needs an 80% reduction in CO₂ emissions between now and 2030, and zero emissions from all energy sources (including transport) by 2035-2040 to be compliant with the Paris Agreement. So far, the Government’s policy response has largely focussed on reducing transport GHG emissions through an accelerated shift to ultra-low and zero emission vehicles (as set out in Government’s Road to Zero strategy). However, evidence is mounting showing that technological fixes will be insufficient to comply with the Paris Agreement, due to factors including pace of change, carbon footprint of electric vehicle production and increases in consumption.

Provisional work carried out by the Tyndall Centre has found that even if all new cars were ultra-low emission vehicles by 2035, a 58% reduction in car mileage between 2016 and 2035 would be needed in the UK. The level of travel reductions in urban areas like the West Midlands are likely to be higher than national averages. There is greater scope to travel more sustainably in denser urban areas, where average trip lengths also tend to be shorter. However, the way we have developed our urban environment over decades has resulted in unsustainable travel behaviour; hypermobility through cars is now assumed and accessibility for many is perceived to be dependent on it. The overall implication of these factors is that significant changes to travel behaviour are also likely to be required to deliver the GHG reductions required to comply with the Paris Agreement.

**Next Steps**

The proposals set out in the current West Midlands Local Transport Plan, Movement for Growth, unlock housing and allow our growing population to access employment with new and improved public transport capacity and targeted highway improvements in the most congested corridors in the West Midlands. TfWM is already reviewing the current local transport plan and initial analysis suggests that the measures outlined in Movement for Growth (MfG) will likely need to be supplemented to help us respond to the climate challenge – both in terms of our travel behaviours and how we build and maintain our transport system.

As well as looking at current issues and challenges, TfWM is also exploring the possible future scenarios that the transport system may reasonably encounter and intends to assess the suitability of a number of plausible mobility and accessibility pathways in these scenarios (exploring how TfWM and its partners could shape the transport system and how well it would achieve objectives under a range of possible future conditions). **TfWM is aiming to develop a transport plan that is consistent with the WMCA’s inclusive growth framework, which seeks to meet the needs and ambitions of our current communities as equitably as possible, without exceeding our environmental limits** (and thereby jeopardising the prosperity of future generations). The tensions between today’s mobility, accessibility and economy, and the change required to resolve the climate emergency will be considered as strategies develop.

WMCA is currently consulting on its draft #2041: Our Action to Meet the Climate Challenge document. TfWM will work with WMCA and other partners to look at how the ideas coming from the consultation can help us with responding to the Climate Emergency as we review the local transport plan. Further engagement and consultation on the local transport plan will be undertaken through close engagement with other areas of the WMCA, constituent authorities, members and the public in due course.

**Credit and References**

For more information, please contact Alex Greatholder, Senior Policy Officer
(Alex.Greatholder@tfwm.org.uk)

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2 As reported by Transport for Quality of Life, based on correspondence with the Tyndall Centre
https://www.transportforqualityoflife.com/u/files/1%20More%20than%20electric%20cars%20briefing.pdf
Enhancing Transport Analysis for the West Midlands

One of the West Midland’s most significant transport analysis asset is PRISM (Policy Responsive Integrated Strategic Model). This was built to gain insight into strategic issues to inform policy and planning, but has primarily been used to support business case development for large public transport and highway schemes and the less frequent refreshes of local planning policy. It has evolved to do this well in the sense that business cases have been successfully produced and defended, and local plans evidenced using the model have withstood planning inquiry examination and challenge.

Whilst PRISM was considered cutting edge at the time of its development, and has been used to great effect over the last 15 years, the model is not able to answer many of the pressing questions facing society and local decision makers around changing behaviours and attitudes, new mobility services and network resilience challenges.

Over the past five years modelling and simulation capabilities and the availability of data has changed dramatically for the better. We want to harness this progress to develop the next generation of models with improved usability and functionality delivered. These drivers are summarised in the figure below:

We are seeking to develop a transport model (or digital twin*) which addresses these challenges. Additional functionality over and above what we currently have in PRISM includes:

- **Short-term forecasting to support the Regional Transport Coordination Centre (RTCC).**
- **Ability to move between a regional scale model to an area-based model to a local model** e.g. a junction using one consistent set of data, and the ability to run these analyses using an appropriate amount of data which makes them do-able in a reasonable timescale (minutes not hours, or hours not days as is sometimes the case now).
- **Improved behavioural modelling** – adding ‘attitudinal’ data to the existing population segmentation to allow testing of travel demand and new mobility queries e.g. responses to short-term disruption on the network, and how people view new mobility options such as mobility credits.
- **Improved user access** – opening up the value of the data in the model to users to access directly in easily understandable map, table and narrative formats, and allow direct access to the models by users (controlled with appropriate role-based access).
A decision will be made during the transport model development as to whether we wish to continue with our use of PRISM or whether the ‘new modelling suite’ will take over PRISM’s role. This decision may not be one wholesale decision but could be split into decisions regarding specific pieces of functionality.

What do we not yet know about how to do this (well)!?

The development of this transport modelling suite throws up a wide range of research questions which are currently not understood, which both TfWM and other transport authorities are currently grappling with. These concern the usefulness of various types of newly emerging real-time data for modelling purposes (both short and longer-term), the relevance of new types of modelling techniques, and the challenges of developing this type of functionality ahead of country specific or global data standards.

There is a lot to do and not all of it will be immediately viable due to data availability or budgetary constraints (the project is funded from Future Mobility Zone grant funding). A prioritisation process will therefore be necessary to ensure the best value for the Combined Authority is delivered.

What does this mean for TfWM/WMCA/Local Authorities?

- Opportunity to support decision making within the RTCC regarding planned and unplanned disruption across a multi-modal network.
- Opportunity to refine decision support based upon our users’ attitudes towards travel, transport modes and willingness to try different ways of travelling.
- Opportunity to support policy based decisions more easily and quickly for existing and new user groups e.g. policy teams (both transport and wider e.g. housing, skills) both for Local Authority partners, TfWM, as well as external parties such as LEPs, and developers and their consultants.
- Ability to provide greater fidelity of transport planning information for decision making.
- Easier, quicker and more intuitive access to transport modelling information, reducing reliance on external consultants.
- Potential for a more up to date and cheaper way to provide updated baseline activity on the network for short, medium and long-term analysis.
- The opportunity to be at the forefront of a wide ranging and innovative programme. Authorities including Oxfordshire County Council, City of York and Transport for London are currently undertaking similar work and we are engaged with them to harness their learning.

Next Steps

The PSI team will be engaging with stakeholders to establish their requirements in Q2/3 2020 and prioritising these to take the best value opportunities forward in the initial tranche of development. Governance will be provided through a project board, STOG, WMAF and the Data, Digital and Systems Board.

* Please note that this work is sometimes referred to as a digital twin which is a digital representation of the built or natural environment which is used to model future scenarios (like our current transport models) and is updated with real-time data (which is one of the areas that we are adding to our capabilities).

Credit and References

For further information please contact Anna Watt, Transport Systems Architect (Anna.Watt@tfwm.org.uk) or Helen Ursell, Principal Transport Planner (Helen.Ursell@tfwm.org.uk).
Real Journey Time

As many bus users will attest, the journey duration experienced on a given service can vary significantly, not just by time of day, but for the same journey on different days. The example below shows the variability in journey time experienced by one bus route over the course of 12 weeks for weekday services travelling approximately 3 miles into Birmingham City Centre between 08:00-08:30.

It is quite clear that the range of journey times experienced varied significantly on this particular route. The majority of trips took between 15-35 minutes, with some of the journeys taking as long as 60 minutes.

For a regular commuter on this route it would be extremely difficult to gauge how long a journey would take on any given day. For a lot of employees who work fixed hours, this variability can have negative impacts – such as being late for work. To prevent this, bus passengers will consider their experiences over time and adjust their journey start time in order to reduce the risk of being late – in effect adding contingency to their journey. This becomes their 'Real' Journey Time. Following some research it has been identified that for most commuters the RJT is around the 95th percentile journey time of all observations.

In the example above it would mean that passengers would need to allow around 30-35 minutes to have any degree of certainty of getting to their destination by the time they need to be there. This will almost certainly mean that on quite a lot of occasions they will arrive at their destination up 20 minutes early but may, on occasion, still be late as some journeys take an hour.

This means that people who make this journey may be wasting up to 20 minutes a day because they have to plan for the Real journey Time as opposed to the timetabled time. In addition, the labour market catchment is smaller than it might appear as journey times to employment are longer and therefore jobs are less attractive. The result of this is that there is a detrimental impact on the Gross Value Added of the West Midlands.

GVA Calculation

The RJT methodology uses real journey times for buses and observed journey times for cars (based upon Google data) and compares them to timetabled journey times for buses and observed car journey times. In essence the methodology is assessing a do-minimum scenario, which uses RJT and a do-something scenario which uses timetabled journey times. Taking this approach allows a calculation to be made which
argues that if bus journey time variability could be eliminated, and buses run exactly to timetable, there would be:

- An increase in GVA as a result of agglomeration benefits and an increased labour market catchment for businesses; and
- A reduction in the amount of time wasted by bus commuters who currently have to allow extra time for their bus journey.

**Results**

After calculating the difference between timetable and RJT for representative bus commute journeys in the AM peak, the results show:

- The average West Midlands bus commuter travelling in the AM Peak period wastes just over 9 minutes each day when allowing for the journey time variability that they experience. This equates to 33 hours per year – almost a working week (equivalent combined value of approximately £200m per year).
- The value of the time that is wasted is similar to the average cost of a bus ticket for each journey.
- The economic cost to the region is approximately £300m per year in lost GVA.

These results suggest that there is a significant loss in both productivity and time as a result of variability in bus journey times. However, there are some limitations with the methodology that has been employed which tend to make the results conservative:

- Only AM Peak journey times have been considered. This means that the impacts of journey time variability through the rest of the day are not factored in.
- Only competing journeys by car have been included in the calculations. Ideally all journeys by all modes should be included in the calculations.
- Passenger volumes are based on census journeys and average time spent on the bus. This could be improved to more accurately reflect bus passenger behaviour.

**Next Steps**

There is clearly merit in further investigating the economic cost of journey time variability and the Real Journey Time that bus passengers need to allow to make their journeys. It is proposed that further work should include:

- Peer review of the concept and methodology.
- Continued dialogue with the Traffic Commissioner / Department for Transport.
- Develop a methodology for calculating the impact for smaller geographies – such as specific corridors.
- Calculate the impacts for the whole day, not just the AM peak.
- Develop a method to capture RJT for all modes.

**Credit and References**

This report was produced by Daniel Pass, Transport Planning & Evaluation Manager (Daniel.Pass@tfwm.org.uk)
Cycle Counters Feasibility Study

Cycle counters in the West Midlands were previously managed by Mott MacDonald as part of a larger data management programme. In recent years data insight for the West Midlands has been brought in-house as a more efficient and consistent way to manage monitoring and evaluation.

A number of automated cycle counters (ACC) in the region were in need of repair and it was decided that a more comprehensive review of their condition as well as overall spread across the region was to be undertaken. It was found that several counters were not operational or were processing data inaccurately. Most of the counters in the region were also using older technology, and it is increasingly more difficult to repair and maintain them.

In addition, the West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP) includes the delivery of new routes across the region, which will also require monitoring and evaluation.

The Data Insight Team and the Cycling and Walking Team jointly commissioned a feasibility study to determine the best way to expand and improve monitoring across the cycle network to take into account potential new routes and provide a more accurate picture of cycling across the region.

What did we learn?

As part of the audit and review we found:

- There are 126 locations on the cycling network in WMCA that have at some point contained a cycle counter.
- **These locations are primarily on sections that see the highest level of usage on the network. Despite this, most sites record fewer than 100 cycles per day,** suggesting that levels of cycling across the network are relatively low.
- Of the 126 locations, under 40% currently contain an operational ACC. This means that the whole of the cycle network is being monitored by fewer than 50 cycle counters. This equates to one operational ACC per 19 kilometres of off-road network and just one operational ACC per 103 kilometres of on-road network.
- **Nearly three quarters of the operational ACC are located within Birmingham City Council’s administrative boundary,** with no operational counters in Wolverhampton and only one in Solihull.

To improve the network of cycle counters as well as overall monitoring and evaluation of cycling across the region, the following is recommended:

- A robust approach to improving data collection on the network through the installation of new ACC across the network along with a programme of intercept surveys of people using the network.
- **A minimum of 127 locations that should be monitored to evidence how the network is being used,** the impact of interventions on usage and the direction of future investment.
- **The new locations are identified in the context of two approaches to monitoring cycling** – key trip attractors and busier locations on the network, and sites that are representative of the network as a whole.
- **Data collected from the ‘representative’ locations can be combined and extrapolated to evidence usage across the whole network.** This approach is important from an equalities perspective to gather evidence and data to support development of active travel in ways that support the people making trips in areas that are away from the busier locations.
This ‘whole network’ approach will provide evidence for the impact of interventions at a more strategic level (such as LCWIP schemes), demonstrating how levels of active travel are changing across the whole of the Combined Authority area.

Although some of these proposed locations are the same as existing locations, the majority are new. This is because, although maintaining historic datasets can be valuable, and where possible locations have been retained, the other existing locations are not sited in places that will help to evidence either the impact of new interventions or how levels of active travel are changing across the whole of the WMCA.

What about Strava and other apps?

Strava and other technologies were considered during the feasibility study. While these technologies are interesting sources of data, they have limitations. For example Strava is marketed to more experienced cyclists. Another issue is that these technologies need to be sense checked using other sources of data such as cycle counters or surveys. Given the limited resources already available, it is important to prioritise a monitoring programme that is robust and reliable.

What does this mean for TfWM/WMCA/Local Authorities?

- A more representative and robust monitoring and evaluation programme of cycling in the region.
- An improved monitoring and evaluation programme which includes new ACC and intercept surveys, using a phased approach for delivery.
- Working with the Regional Transport Coordination Centre and WM5G to identify opportunities to work jointly to reduce duplication of work and cost in delivery.
- The West Midlands Bike Share Scheme will also provide opportunities to monitor and will be considered in due course.
- The Commonwealth Games sites will need to be monitored, however placement of a permanent ACC will depend largely on long term plans for cycling around these venues.
- In areas where it is important to monitor both cycling and walking, a sensor that is capable to count across modes will be installed.
- The evidence will also be valuable across different policy areas such as health, housing and crime, helping to provide evidence for the impact of policy changes in these areas and highlighting synergies between the disciplines.

Credit and References

The Data Insight Team (Jason Davies, Anthony Atkins, Stuart Lester) and the Cycling and Walking Development Team (Hannah Dayan, Claire Williams) commissioned the Cycle Counters Feasibility Study.

For further information, please contact Claire Williams, Cycling and Walking Manager (Claire.Williams@tfwm.org.uk) or Stuart Lester, Data Insight Manager (Stuart.Lester@tfwm.org.uk)
Bromsgrove Station Relocation and Service Enhancement Study

In September 2016, following an investment of £24m, a new rail station facility was opened at Bromsgrove, with a staffed ticket office, passenger waiting rooms and toilets, 359 onsite car parking spaces, new bus stops, a taxi rank, pedestrian footpaths and a cycle store. From 29th July 2018, the newly installed overhead powerlines became fully operational. This enabled a full electric service increasing train frequency between Bromsgrove and Birmingham from 1 train an hour to mostly 4 off peak, additional services at peak times, an increase in services from Bromsgrove to Barnt Green and consequent improved connectivity with Redditch.

TfWM’s Human Intelligence Team conducted a number of surveys to measure and understand the impact of service enhancement. A survey was conducted in 2012 before Bromsgrove station relocation, and more recently in 2018 after the station relocation, and in the months before, and immediately following service enhancement through electrification (July – Nov 2019). The latest survey was conducted between October-November 2019, a full 12 months after the 2018 study, to continue to measure the impact of service enhancement at the end of July 2018.

Survey Results

For the 2019 survey, passenger boarding and alighting counts were conducted at the station, and occupancy counts at the station car park. In addition, a face to face ‘profiling’ survey was conducted, with interviews concentrated on outbound trips between 0622hrs (ahead of the first train) – 1400hrs, on four weekdays and one Saturday. A brief summary of some of the results is provided below.

Car Park Counts

In 2019, the highest weekday average count of 308 was recorded at 1400hrs, as displayed in the chart above; with a total of 359 car parking spaces at Bromsgrove Station, this occupancy rate translates to 86% total capacity. Car park counts in July of 2018 recorded an occupancy rate of 52%, so this demonstrates that average weekday car park occupancy has increased. The 2019 car park counts also found that average car park occupancy on a Saturday had increased by 21% since Oct-Nov 2018’s counts, and by 117% since July 2018’s counts.
Frequency of Service Use

When asked how often they travelled by rail from Bromsgrove Station, around a third of interviewees (35%) travelled from the station 5 days per week or more, slightly less (31%) travelled 2-4 days per week, and lower proportions either travelled once a week (14%), once a month (8%) or less often than this (10%). Just 2% of respondents were first time users. Commuters were most likely to be ‘daily’ station users (at 63%), whereas leisure users were more likely to be occasional users (less than monthly/first time), at 29% collectively.

Mode to Station

Based on the interviews conducted at the station, across all trip purposes, 30% of respondents walked to the station, and 30% drove to the station – both the most common mode of access. A further 25% were car passengers. Furthermore, 7% arrived by bus, and 4% arrived by taxi.

What does this mean for WMCA/ TfWM?

The full survey results demonstrate that passenger numbers continue to grow, and car parking has increased, though is not yet at capacity. Positively, on street parking near to the station also appears to be low. Awareness of the improved services is low amongst most recent station users, and there may be scope to run a local advertising campaign reminding local residents of the improved connectivity.

Moreover, the results demonstrate that the investment in Bromsgrove Station and the service enhancements have had a positive impacts, helping to support TfWM’s objectives relating to public transport usage, accessibility and sustainable travel. It is valuable evidence of the positive impact TfWM is making and can be used to help build the case for further investment across the rail and rapid transit network.

Credit and References

This study was conducted by TfWM’s Human Intelligence Team. For more information, please contact Sarah Bayliss, Human Intelligence Manager (Sarah.Bayliss@tfwm.org.uk)
Comparing the West Midlands Workplace Population Growth and Decline from 2001 to 2011

Since 2001 some business areas across the West Midlands have seen a positive increase in employment, indicating that these are areas of sustained growth and employability for those residents who live in a travel catchment area. This insight may be useful for recognising potential increases in travel demand for evidence based travel planning.

At the same time, some areas have observed a negative decline in employment, suggesting that these areas may be at risk for higher unemployment, skills emigration and reduced economic output. This insight may be useful for recognising areas that require additional support, better access to other employment centres or change of use to housing.

This research presented a challenge as the geographical boundaries of the 2001 census were different to that of the 2011 boundaries; some had been split and some combined. A complex join was used to process these boundaries through FME Software to determine the true variance in workplace population.

What did we learn?

The Highest Growth Areas in the West Midlands overall were:

1. Wolverhampton New Cross Hospital (+4,634)
2. Queen Elizabeth Hospital (+3,785)
3. Dudley Russell Hall Hospital (+3,167)
4. University Hospital Coventry (+3,075)
5. The Fort Shopping Park (+3,017)
6. Whitley Business Park (+2,936)
7. Grand Central, Bullring, & Bullring Market (+2,656)
8. Broad Street & Brindley Place (+2,329)
9. Oldbury Retail Park (+1,795)
10. Keresley Engineering Park (+1,732)
11. Black Country Living Museum & Castlegate Business Park (+1,681)
12. Birmingham City Hospital (+1,639)
13. Arena Birmingham, ICC & SEA Life Centre (+1,504)
14. Blythe Valley Business Park (+1,355)
15. Area north of Canley Station (+1,301)
16. Solihull Town Centre inc. Touchwood (+1,301)
17. Birmingham Children’s Hospital (+1,244)
18. M6, J2 Retail Park (+1,226)
19. University College Birmingham (+1,205)
20. University of Birmingham, King Edward’s School & the MAC (+1,179)

What might explain these increases?

Many of the increases in workplace population centre on hospital sites, which may indicate an increase in recruitment due to a growth in demand and localised population growth in the hospital catchment area. Some shopping districts have also seen an increase in workplace numbers which may be due to new retail sites in the area.

Leisure attractions also favour highly on workplace population growth with the Black Country Living Museum and concert hall Arena Birmingham both observing increases. University College Birmingham and University of Birmingham also see workplace population growth.
The Highest Decline Areas in the West Midlands overall were:

1. Allesley North Business Park inc. JLR pilot site (-5,353)
2. Longbridge Town Centre/old Rover site (-3,919)
3. Heath Town Park Area (-3,321)
4. Mondelez International (-2,613)
5. Area north of Stoke Aldermoor (-2,549)
6. Aerospace and Manufacturing hub north of Fordhouses (-1,989)
7. Car & Travel hub north of Coventry Airport (-1,981)
8. Coventry City Centre (-1,699)
9. Area surrounding Middlewood Close, Solihull (-1,523)
10. Dudley area inclusive of Auckland Road (-1,293)
11. Edgwick, Coventry (-1,261)
12. Area north of Washwood Heath road (-1,211)
13. Area surrounding Selly Oak health centre (-1,104)
14. Clayhanger, Brownhills (-1,061)
15. Sheldon High Street (-1,021)
16. Birmingham Gay Village area (-1,000)
17. Coseley (-965)
18. Broadwalk Retail Park, Walsall (-930)
19. Springvale Way Retail Park, Bilston (-882)
20. Area north of Halesowen cricket club inc. McDonalds (-880)

What might explain these decreases?

Many areas that have observed a workplace population decrease are those that include an old or current manufacturing site. The associated decrease may be resultant of changes in demand for certain manufactured goods in the UK, or an increase in automation of certain manufacturing processes.

A number of retail parks also saw a decline in workplace population indicating a likely reduction in travel demand to these areas as a shopping destination. This could be due to a number of reasons that may require further investigation, such as whether there have been any changes in accessibility (e.g. fare increases, congestion, travel times) or the retail sites available no longer serving the needs of the catchment area.

What does this mean for TfWM/WMCA?

This research illustrates that growth has been isolated only to certain sectors and local areas. We therefore need to do more work to better understand the implications that this might have on inclusive growth and travel behaviour.

Credit and References

For more information, please contact Charmaine Swann, Data Innovation Analyst (Charmaine.Swann@tfwm.org.uk) and Kerrie Osborne, Spatial Data Developer, (Kerrie.Osborne@tfwm.org.uk).
Future Projects

Engagement in research and evidence building at TfWM never stops. Below is a snapshot of some of the articles which will feature in the next issue of TfWM’s Quarterly Research and Publication Review, which is due to be released in April 2020.

Freight
Understanding freight movement in the West Midlands is vital for informing the Movement for Growth Review and identifying the opportunities and challenges faced by the logistics industry. The next edition of the Quarterly Research Paper will include an Academic view of Freight in the West Midlands.

Movement for Growth Review Evidence Base
Interested in the Movement for Growth review? Rest assured, we will keep you updated as our evidence base insight develops. The next edition of the Quarterly Research Paper will include a summary of issues & challenges found so far in the Movement for Growth review.

Watch this space!

Submissions wanted!
Are you a local authority or public sector organisation with an exciting project or a new strategy? Do you want others to hear about your work to help build connections and encourage collaboration? The TfWM Policy and Strategy Team are keen to promote and summarise projects, strategies and policy documents from throughout the West Midlands. So if you have a request for an item that you want to include in the Quarterly Research Paper please get in touch with Ellen Peacock, Policy and Strategy Officer at TfWM (ellen.peacock@tfwm.org.uk)
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Get in Touch With Us

If you would like to speak to someone about any of the projects and research showcased in this issue, please contact the respective credited authors/contributors.

If you would like to contact us regarding the content or publication of these Quarterly Research and Publication Review, or if you have an idea for an article in an upcoming issue, please contact Ellen Peacock, Policy and Strategy Officer (ellen.peacock@tfwm.org.uk).