

SUSTAINABILITY AND TRANSPORT OVERVIEW AND SCRUTINY COMMITTEE

AGENDA

- 105 - 154**
- 6 **CLEAN AIR ZONE BASELINE DATA – DISCUSSION ON FINDINGS**
- Stephen Arnold, Head of CAZ
- 7 **TRANSPORTATION & HIGHWAYS CAPITAL PROGRAMME 2022/23 TO 2027/28**
- Philip Edwards, Assistant Director and Rachel Telfer, Transport Planning & Investment Manager, Transport & Connectivity.
- 155 - 208**
- 8 **FLOOD RISK MANAGEMENT ANNUAL REPORT**
- Hannah Hogan, Flood Risk Manager and Honorary Alderman Tony Kennedy, Advisor to the Cabinet Member for Transport & Environment on Flooding issues.
- 209 - 214**
- 9 **WORK PROGRAMME**
- For discussion.
- 10 **DATE AND TIME OF NEXT MEETING**
- To note the date and time of the next meeting.
- 11 **REQUEST(S) FOR CALL IN/COUNCILLOR CALL FOR ACTION/PETITIONS RECEIVED (IF ANY)**
- To consider any request for call in/councillor call for action/petitions (if received).
- 12 **OTHER URGENT BUSINESS**
- To consider any items of business by reason of special circumstances (to be specified) that in the opinion of the Chair are matters of urgency.
- 13 **AUTHORITY TO CHAIR AND OFFICERS**
- Chair to move:-
- 'In an urgent situation between meetings, the Chair jointly with the relevant Chief Officer has authority to act on behalf of the Committee'.

BIRMINGHAM CITY COUNCIL

SUSTAINABILITY AND TRANSPORT O&S COMMITTEE

**1400 hours on 16th February, Council House Extension, Margaret Street –
Actions**

Present:

Councillor Liz Clements (Chair)

Councillors Eddie Freeman, Julie Johnson-White and Timothy Huxtable

Also Present:

Ceri Saunders, Acting Group Overview & Scrutiny Manager

Baseema Begum, Scrutiny Officer

1. NOTICE OF RECORDING/WEBCAST

The Chair advised those present that the meeting would be webcast for live and subsequent broadcast via the Council's Youtube site and that Members of the press/public may record and take photographs except where there are confidential or exempt items.

2. APOLOGIES

Cllrs Zaker Choudhry and Hendrina Quinnen.

3. DECLARATIONS OF INTERESTS

Standing declarations noted. Cllr Huxtable declared that he sits on the West Midlands Bus Alliance as the West Midlands Mayor's nominee.

4. SUSTAINABILITY & TRANSPORT O&S COMMITTEE ACTION NOTES

The action notes of the meeting held on 20th October were agreed.

Phil Edwards clarified that the metro extension to Edgbaston Village is due to open in May 2022.

5. CABINET MEMBER FOR TRANSPORT & ENVIRONMENT- ANNUAL REPORT

(See Item No.5)

The Chair introduced the item and welcomed Councillor Waseem Zaffar, Cabinet Member for Transport & Environment; Phil Edwards, Assistant Director, Transport & Connectivity and Kevin Hicks, Assistant Director, Highways & Infrastructure who had joined the meeting virtually.

Councillor Waseem Zaffar outlined the key points from the presentation and during the discussion, and in response to Members' questions, the following were among the main points raised: -

- Supporting public transport recovery and helping people return to work is one of the keys to economic recovery. This is a challenge and work is being done with the West Midlands Bus Alliance and National Express West Midlands in respect of increasing public confidence in the bus network for work journeys however additional support from government is needed to ensure that vital services can continue and this includes keeping buses efficient and affordable.
- A vital part of increasing passenger confidence is being done as part of the Commonwealth Games. Significant work has been done to promote it as a 'public transport games' encouraging people to use public transport to access venues and events.
- Cross city bus development and bus priority lanes are key to encouraging more people to access and use buses.
- Improving air quality through the city and regions transport fleet is key and government proposals for Zero Emissions Buses for Regional Areas (ZEBRA) funding would be welcomed so that the hydrogen economy in the area can be grown by working with partners to do more. There is an appetite for the city to become the test pilot for hydrogen buses and infrastructure ahead of the Commonwealth Games and hydrogen buses could be used to help deliver the Bus Rapid Transit (SPRINT) routes.
- The first set of data from monitoring the air quality since the introduction of the Clean Air Zone (CAZ) is due to be published next week. There has been some behaviour change in terms of compliance with 9/10 cars going through the zone compliant. World Health Organisation (WHO) targets are being monitored as well as keeping an eye on what the government are doing. The Council has produced a Clean Air Strategy with its key aim being to improve air quality and a target to reach safe levels of nitrogen dioxide (NO₂) in the air for the whole of the city.
- Raising awareness of the importance of good air quality with all citizens as their personal input is crucial. The message has been to focus on what more individuals can do personally in changing their behaviour alongside local authorities and others to make an impact on NO₂ levels.
- Tackling idling outside schools is being discussed with colleagues from Environmental Health in respect of enforcement to ensure that the correct traffic regulation orders are in place. Best practice from other local authorities is also being looked at to understand how best to act in terms of penalties. The Council's civil enforcement contract is due to be renewed next year and so this

issue will be picked up as part of the tender process and form part of the new contract.

- Improving driver behaviour and road safety are a key concern and priority. Both physical and education/behavioural interventions need to be put in place however resourcing this is crucial with schools unable to fund this. CAZ revenue funding is being used to prioritise a safe environment and promote air quality through the installation of air quality monitoring stations in a school in each of the city's 69 wards over the coming months.
- An email will be sent to all councillors in relation to Modeshift stars to encourage them to lobby schools in their wards. Information will be included on which schools have signed up and those that haven't so that members can contact the schools directly.
- The work on the Midland Metro is vital as part of the public travel offer and the Cabinet Member is given weekly updates on the status of various works. Currently the Westside extension is due to open in May 2022. Section 1 (Bull Street) is due to be completed before the Commonwealth Games. The work on Section 5 (Digbeth High St) will be stood down until after the Commonwealth Games but the area will be tidied up for visitors. The overall deadline for completion of the Eastside extension is anticipated as 2024 however there is a key linkage with HS2 subject to negotiations on when works can take place.
- An integrated rail plan is being worked on with stakeholders and is a big opportunity to do more especially in respect of connectivity across the midlands region.
- The Perry Barr neighbourhood is the most connected in the region and this covers all modes of transport including cycling, walking, buses and rail.
- A funding bid for City Region Sustainable Transport Settlements (CRSTS) is currently being assessed by government. It is anticipated that further details may be shared at the West Midlands Combined Authority (WMCA) Board meeting on 18th March and to the Cabinet meeting on 22nd March as part of the report on the Transportation & Highways Capital Programme 2022/23 to 2027/28.
- The additional capital funding from CRSTS is welcomed as it provides certainty for planning and a programme of schemes for the next 5 years. This funding will not cover all the ambitions and objectives that the city has as part of the Birmingham Transport Plan, Birmingham Development Plan, Clean Air Strategy and other key policies. The Council is therefore not relying on government resources and is looking at several other funding options to supplement these monies.
- E-scooters have geo-fencing technology that means that the speed limit drops to 5mph when used in pedestrian areas such as the city centre to help keep people safe. Unfortunately, privately owned e-scooters do not have this speed limiter technology.
- The Council continues to work with partners and TfWM in relation to park and ride and a number of sites are being explored however rail commuting in particular has taken the biggest hit in terms of lower usage following the recovery from covid.

- Work is continuing on Controlled Parking Zones (CPZs) with key larger schemes moving forward in Newtown, Cheapside and the city centre. There is potential displacement to be considered with the latter with the introduction of the CAZ however the Council is working with the WMCA on this as well as identifying monies for improvements from ward improvement budgets, section 106 and ward funding.
- Approximately £130m in capital investment over 3 years (since last year) on top of the revenue payment to the current interim contractor has been put into road resurfacing. It is acknowledged that the issue is important, and members are receiving a lot of complaints. It should be noted that a lot of work is happening across the city and the additional impact that has on the road network (such as the additional work for the Commonwealth Games) so there is a balancing act needed.
- The Department for Transport has approved a business case for procurement for the highways PFI contract and the Council has been given the go ahead to proceed with putting the contract out for procurement and as such it has been added to the procurement contractors' portal this week.
- Interagency work is taking place with the Environment Agency and Severn Trent in relation to managing flooding and the River Cole. A further update will be provided as part of the Flood Risk Management Annual Report to be presented to this committee next month.

RESOLVED: -

1. The report was noted.

6. WORK PROGRAMME

(See Item No. 6)

The Chair confirmed details and agenda items for the next meeting and during discussion two further items were agreed to be added to the agenda as follows: -

1. Clean Air Zone baseline data – discussion on findings.
2. Transportation & Highways Capital Programme 2022/23 to 2027/28

In respect of the report to Cabinet on 22nd March on the Transportation & Highways Capital Programme 2022/23 to 2027/28 a briefing will be organised for the Chair in advance of the committee's next meeting. A copy of the report to Cabinet will be circulated when it is available.

RESOLVED: -

1. The report was noted.
2. Additional items to be added to the agenda for the next meeting.

7. REQUEST(S) FOR CALL IN/COUNCILLOR CALL FOR ACTION/PETITIONS (IF ANY)

None.

8. OTHER URGENT BUSINESS

None.

9. AUTHORITY TO CHAIRMAN AND OFFICERS

Agreed.

RESOLVED: -

That in an urgent situation between meetings the Chair, jointly with the relevant Chief Officer, has authority to act on behalf of the Committee.

The meeting ended at 15:43 hours.

Report from Transport for West Midlands to the Sustainability & Transport O&S Committee – 16th March 2022

Subject: West Midlands Local Transport Plan Draft Core Strategy engagement

Report of: Mike Waters, TfWM Director Policy, Strategy & Innovation

Report author: David Harris, TfWM Transport Strategy & Place Manager

1 Purpose and Attached Documents

- 1.1 The purpose of this briefing is to provide an update Birmingham's Sustainability & Transport Scrutiny Committee on the development of a new West Midlands Local Transport Plan and in particular the engagement on the new Local Transport Plan Core Strategy. WMCA Board approved the draft Core Strategy for consultation on 14th January 2022. The engagement commenced on 7th February 2022 and will run until 4th April 2022.

2 Recommendations

- 2.1 Note the proposed approach and progress on development of the West Midlands Local Transport Plan (LTP) and the publication of the West Midlands Transport LTP Core Strategy for consultation.
- 2.2 Provide comments and views on proposed vision and approach for the new West Midlands Local Transport Plan and what it means for Birmingham.
- 2.3 Note the approach for developing the LTP Big Moves and Area Strategies through to Summer 2022.
- 2.4 Advise how TfWM and Birmingham officers can support and work with elected members in communicating and building awareness of the issues the LTP seeks to tackle and developing improved engagement with communities on how we can start to change travel behaviours.

3 Appendices

- 3.1 WM LTP Green Paper Engagement Summary Report
- 3.2 WM LTP Draft Core Strategy
- 3.3 WM LTP Draft Core Strategy Summary

Background

- 4.1 Since Movement for Growth (the fourth West Midlands LTP) was published there have been significant changes to the policy context including changes to the political, social and economic landscapes which have implications for transport policy and plans. Most significant of these are the impact of the Covid-19 pandemic and the challenge of climate change, with the WMCA declaring a climate emergency in 2019 and committing to ambitious plans of becoming a net zero region by 2041.
- 4.2 The first [WM2041 five year carbon plan](#) was approved and adopted by the WMCA Board in March 2021. This set out a priority for WMCA to support changes in travel behaviours through reduction in car usage and a much higher modal share of public transport and cycling. A key deliverable for WMCA was producing a new LTP aligned to WM2041. In July 2021, Transport for West Midlands published the 'Reimagining Transport in the West Midlands' Green Paper. The purpose of the Green Paper was to start a conversation with politicians, public and stakeholders on how transport policy and strategy in the West Midlands could change. The focus was to engage on how the region could better respond to the big challenges it faces, including responding to the economic downturn and the climate emergency, as described in the Green Paper through five 'Motives for Change'.

Green Paper Engagement, Summer 2021

- 4.3 The [Green Paper](#) engagement over the summer of 2021 saw over 600 full responses (and around 700 partial responses) to the public survey and around 20 detailed responses from a range of stakeholders including local businesses. In addition, a series of deliberative engagement and citizens panel sessions also took place with around 60 stakeholders and a group of around 70 individuals through the Transport for West Midlands online community. This group was demographically representative of people from across the region. A summary of the results of the engagement is appended at **Appendix 1**, but the key messages include:
- The issues raised in the motives for change resonated with respondents who felt that these were important. Climate change and addressing inequality were the areas of most concern.
 - There was a clear sense from responses that the current approach to transport was not delivering sufficient improvements, or that things were getting worse. 92% of respondents were fairly concerned or very concerned by climate change and 83% agreed that a key policy aim should be to tackle inequalities in transport access.

- There was a view that the West Midlands could not build its way out of the problems and should adopt an approach which places greater emphasis on using existing transport infrastructure better.
- Two thirds of respondents felt that levels of traffic on local roads were now a problem.
- The majority of people acknowledged that increasing levels of active travel were important, but that a lack of safe infrastructure and busy roads were a barrier to more people choosing to walk and cycle.
- The shift to electric vehicles was supported, but there was concern that the challenges of congestion would not be resolved.
- Whilst the car is still going to be important for many people's travel choices, a majority of people agreed that car use needed to be reduced. Many were open to new ways of accessing cars instead of private car ownership.
- When subsequently polled, 68% of a sample of respondents to the original consultation strongly agreed or agreed with the need for the use of 'sticks' to achieve significant change in travel behaviour. However, less people believed that either national or local government would use them within the next 5 years.

National Policy

4.4 The last 18 months have also seen a number of policy statements from Government which have placed an emphasis on transport's role in responding to the need to rapidly decarbonise; delivering HMG's levelling up agenda; and supporting the post pandemic recovery of the UK. This has included an ambition to see half of all journeys in cities and towns walked or cycled by 2030. The Government has made it clear that local authorities will be expected to take the lead on bold decisions to influence how people travel; and to take local action to make the best use of space. These changes are in order to enable active travel and transform local public transport, including though considering appropriate parking or congestion management policies to promote and support the desired behaviour change.

4.5 Government has said it will drive decarbonisation and transport improvements at a local level by making quantifiable carbon reductions a fundamental part of local transport planning and funding. This has influenced the approach to the City Regional Sustainable Transport Settlement programme. Further LTP guidance is expected to be published by Department for Transport in early 2022; and future funding decisions are likely to be directly informed by the level of reductions which are evidenced.

Developing the new West Midlands Local Transport Plan

- 4.6 Following engagement on the Green Paper, a discussion with local authority Leaders took place on how the West Midlands should develop its new LTP. There was consensus that investment in transport remains critical to support the region's growth outcomes, enable modal shift, and improve accessibility – especially in traditionally under-served and deprived areas of the region. The pandemic has exacerbated some of our longstanding economic challenges around inequality, poverty, and poor health. The new LTP will help continue to make a strong case for transport investment, such as the City Regional Sustainable Transport Settlement, that will play a critical role in opening-up opportunities for communities across the region. There will be a focus on allowing the region to quickly regain growth momentum and avoid long-term post-pandemic economic scarring, whilst helping us to make good progress towards developing a carbon neutral transport system.
- 4.7 However, despite the positive progress being made, the need for more fundamental change was acknowledged and accepted. Our current approach is largely focussed on improving alternatives and informing travellers so they understand the benefits of using those alternatives. Whilst continuing to invest in the alternatives to the car is going to continue to be important, this alone won't be sufficient to generate the kinds of behaviour change needed to meet our aims.
- 4.8 We know from reviewing the impact of the current approach and modelling different scenarios that with the policies and programmes we have in place now we won't deliver the scale and pace of change that we need – even if we had significantly higher levels of funding to improve the public transport network or build more cycle infrastructure. Based on current actions we would not meet our WM2041 target for carbon reduction (or even the UK 2050 climate change emissions targets), and we would continue to make marginal progress against the other issues raised in our Motives for Change. Ultimately, without a change in direction, transport risks becoming a handbrake on the greener, fairer inclusive growth the region wants to deliver.
- 4.9 In discussion Leaders identified that being risk averse (carrying on with the same policy approach) would in itself be a risky strategy that fails to deliver the kind of transport system needed to meet the aims the region has agreed to try and achieve. The importance of demand management to achieving behaviour change was understood and it was acknowledged that Government policy is channelling local government towards such measures.
- 4.10 However, across the public and stakeholders there remains a significant lack of consensus around the best way to engender the behaviour change required. There are also significant concerns about the impacts of change at such an

unprecedented scale and pace. To further complicate the matter, as a result of COVID-19 impacts, there has also never been so much uncertainty about how travel behaviours will change further into the medium to long term.

- 4.11 A challenge for the new LTP will be honesty about the need to manage demand to help deliver the scale of behaviour change required and about the consequences of not taking appropriate action. The plan is being developed to account for this challenging position. It is being honest about the need for a demand management approach to help the transport system deliver against the region's wider objectives and vision. However, it is positioning the choice to manage demand as something that needs to be worked through with local people, communities and stakeholders with an understanding of the issues that will need to be managed if we carry-on as is. Engagement with the public and stakeholders will need to be on-going and more extensive than ever before. It will be important for the LTP to be understandable and relatable for the public and using TfWM's traveller segmentation tools we have started to articulate the vision through images of the places people experience and how transport underpins their day-to-day activities.
- 4.12 This approach will also enable the West Midlands to be realistic and clear over what is and is not within the gift of local leadership – understanding that appropriate local action on local streets can help give us a quieter and healthier urban environment, but that more transformational behaviour change (for example to significantly reduced carbon emissions) requires broader consensus across the country and national leadership (and sharing of the burden). Ultimately one regional area will struggle to be radically transformational without risking unintended and disadvantageous consequences for its economy. Conversely, change adopted at a similar pace and more uniformly across the country means concerns over economic displacement effects can be managed and companies operating across these geographies can plan and deliver national operating protocols with more confidence. This latter point is particularly relevant to the freight, logistics and automotive industries which the West Midlands is a national leader in.
- 4.13 Given the above context the approach to developing and implementing change will need to be different. To respond to this, the new LTP will have a dynamic and flexible approach to transport policy and delivery. A dynamic plan, which is regularly reviewed, will enable an on-going discussion with members and the public on how and where progress can be made on more or less difficult pathways. The draft Core Strategy sets out a policy tool kit framed within 6 Big Moves, from which WMCA, TfWM and local authorities will need to develop their delivery plans.
- 4.14 The Big Moves are all intended to improve the transport system to encourage a change in travel behaviours and deliver against our motives for change. The need

to consider accessibility more holistically, i.e. not just through mobility but also through better spatial planning and digital connectivity ('the triple access system') is also reflected. This is illustrated in the figure below showing connection from the 'big moves' the motives for change.

Through Action against the 6 big moves...	...changes citizens' experience of transport options...	...which changes their behaviour...	...which divorces accessibility from the impacts of transport...	... and delivers our motives for change
• Behaviour change for the better • Growth that helps everyone • Safer streets to be more active • Public transport that connects people and places • A resilient and safe transport network • Delivering a green revolution	• Reliable • Efficient • Flexible and convenient • Personalised • Well-connected • Comfortable • Accessible and easy to use • Affordable • Safe and secure • Cleaner and greener • Healthy • Modern	Avoid • Reduce travel Shift • Change destination or route • Change mode Improve • Choice to drive more efficiently • Choice to use more energy efficient vehicles	• Traffic reduction • Electrified transport • Improved accessibility	• Sustaining economic success • Creating a fairer society • Supporting local communities and places • Becoming more active • Tackling the climate emergency

4.15 The big moves policies will be detailed further in a series of additional LTP documents to be developed and consulted on during 2022. In addition TfWM is working with local authorities to develop a suite of Area Strategies within the framework of LTP policies. These will sit beneath the Core Strategy and alongside the Big Moves and will translate the policy tool kit into local areas. They will help us develop plans to solve the challenges of different kinds of places, covering neighbourhoods, corridors and centres but which are tailored to diverse places within areas/districts.

4.16 Following WMCA Board approval in January, engagement on the draft Core Strategy has now started and will run through to 4th April 2022. The engagement

will use a range of channels to maximise awareness and engagement across stakeholders and the general public. The Local Transport Plan details can be viewed [here](#). Subject to feedback and updates to the LTP it is intended that a final Core Strategy and draft Area and Themes strategies will be presented to WMCA Board in summer 2022. A copy of the draft Core Strategy (**Appendix 2**) and summary document (**Appendix 3**) are attached.

Background papers

‘A Transport System Fit to Tackle Climate Change? - Reviewing the West Midlands Local Transport Plan to support a Greener, Fairer, Healthier Recovery’, WMCA Board Report, 24th July, 2020.

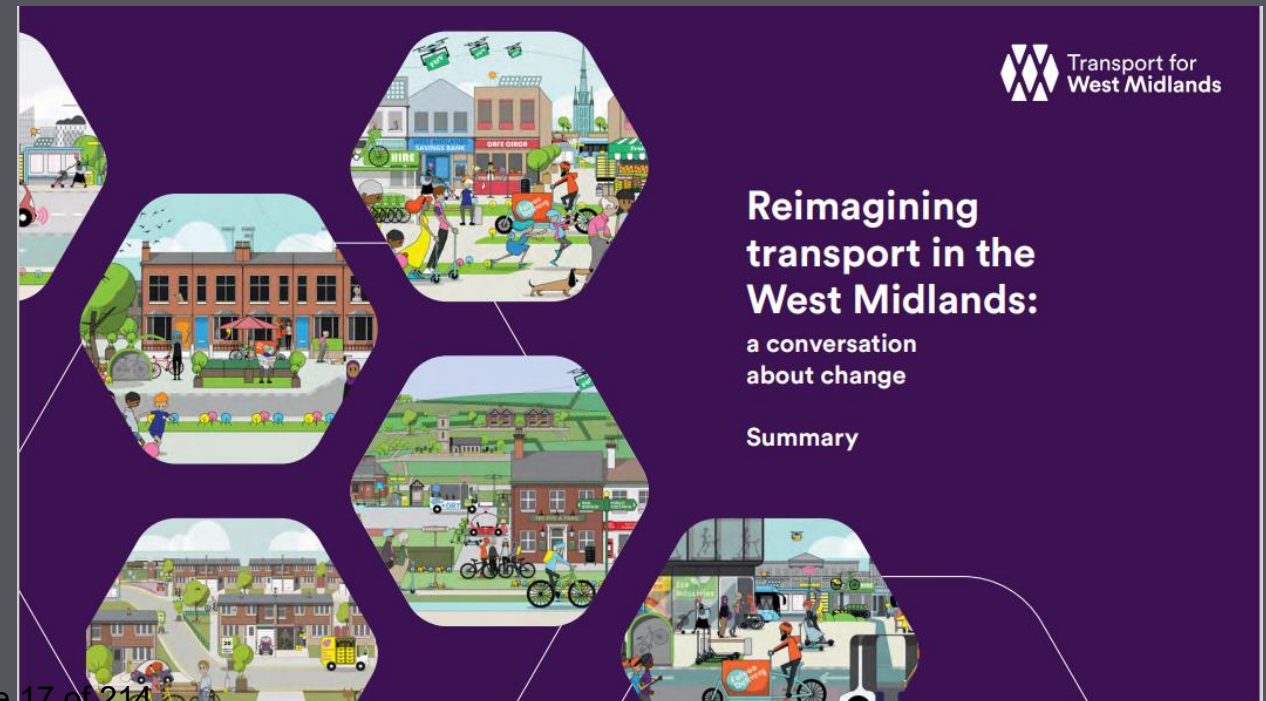
<https://governance.wmca.org.uk/documents/s4451/WMLTP%20Review.pdf>

‘Reimagining Transport in the West Midlands – A Conversation About Change’, Local Transport Plan Green Paper, July 2021

<https://www.tfwm.org.uk/who-we-are/our-strategy/green-paper-2021/>

Reimagining transport in the West Midlands: A conversation about change

LTP Green Paper Engagement Summary



LTP Green Paper Engagement Summary

1. Engagement Plan “What we did”
2. How we did it
3. What was said
4. Engagement summary and policy implications

Produced by TfWM Policy, Strategy and Innovation Directorate

LTP Green Paper: Overview

- The LTP Green Paper: Reimagining Transport in the West Midlands was published on the 1st July 2021
- The Green Paper serves as a consultation document for the general public, businesses and other key stakeholders in the West Midlands
- It will inform the development of the new Local Transport Plan (LTP5) for the West Midlands Combined Authority
- The document is based around five key Motives for Change, which encapsulate the main challenges facing the region in relation to transport:
 - Creating a fairer society
 - Supporting local communities and places
 - Becoming more active
 - Tackling the climate emergency
 - Sustaining economic success
- The Motives for Change were developed as part of an evidence gathering exercise which formed the basis of the LTP Green Paper



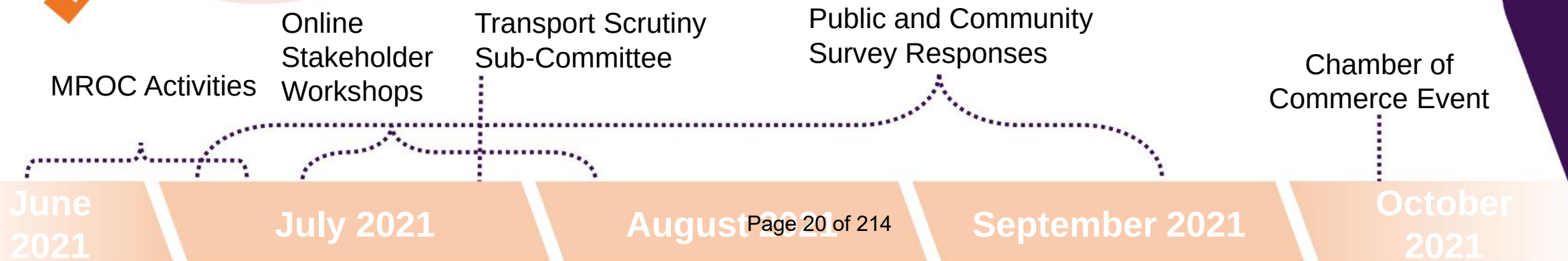
[Reimagining transport in the West Midlands - WMLTP5 Green Paper | Transport for West Midlands \(tfwm.org.uk\)](https://tfwm.org.uk)

LTP Engagement Strategy



LTP Engagement was conducted through various channels, including:

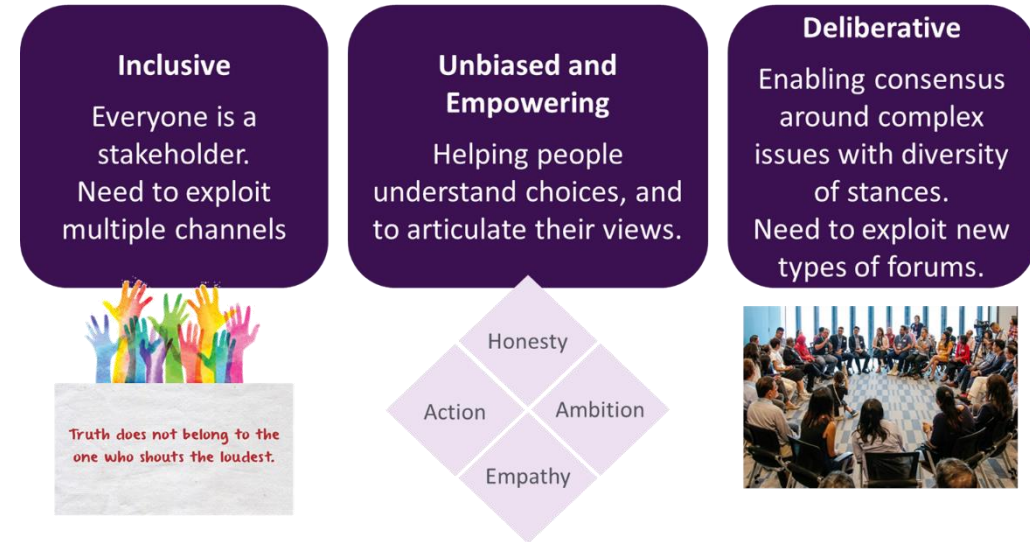
- Public surveys which were disseminated via social media, mail and email
- Market Research Online Community (MROC) and targeted quick-poll surveys
- Online and in-person workshops with key stakeholders
- WMCA Boards



LTP Public Engagement Campaigns

- The Green Paper was publicised via: TfWM's website, constituent authorities' websites, emails via Campaign Monitor and networks, social media, press releases and community outreach partnerships
- The citizen and business/community surveys were published on the 5th July and remained open until the end of September
- A follow up 'Quick Poll' survey for LTP survey participants who wished to take up in further research, which gathered more information on perceptions and use of policy mechanisms and the opportunities/threats posed by decarbonising transport
- An in-person business engagement event was facilitated by the Birmingham Chamber of Commerce and transport planning consultancy Atkins

Engagement Principles and Aims



- **Identify citizen's preferences** on how to meet objectives
- **Build understanding** of the day-to-day aspects of travel that are **key to positive customer experience**
- To build understanding of the **gap between plans, trends and aspirations**
- To build understanding of the **kinds of interventions** that **would bridge the policy gap**
- To **develop consensus around new policy strategies** that would help people make the changes required

Public Survey Design

- Two types of survey were developed for the LTP Green Paper:
 - one for general citizens of the West Midlands,
 - another for businesses and community organisations
- Each survey included four sections with a mixture of closed (selected from discreet options) and open-ended (respondents to provide text-based answers) questions.
- The public were also invited to leave further comments/ feedback at the end of the survey and to take part in future research.
- TfWM ran a follow up 'Quick Poll' survey for LTP survey participants who wished to take up in further research.
- This gathered information on perceptions and use of policy mechanisms and the opportunities/threats posed by decarbonising transport.

Survey Sections



Market Research Online Community (MROC) Engagement

- Engagement was facilitated by research agency Mustard, who ran two activities
- Activity 1 ran over one week in June 2021 and focused on members' travel behaviour and journey patterns, open for all to respond with a prize draw incentive
- Members were asked questions on their travel behaviour, why they chose to travel in certain ways and their perceptions of different modes of travel
- Activity 2, for which interested members were selected, involved a 9-day session which explored a world without cars and getting members to explore potential alternatives
- Here, projective techniques were used to gather more in depth data on members' motivations, beliefs, attitudes and values, through a hypothetical scenario where private cars were no longer available.

Targeted Stakeholder Activities

- Stakeholders were identified and selected for engagement activities according to how closely they needed to be involved, interest in the LTP and involvement in regional decision making.
- Four stakeholder webinars were held, which focused on recovery from the pandemic (short term) and the Motives for Change (long term).
- These ran in parallel to other surveys, social media and MROC activities.
- The Young Combined Authority was engaged. This is a WMCA board of 16-25 year olds, representing the diverse and young population.
- Key business stakeholder were also engaged through a face-to-face event facilitated by Birmingham's Chamber of Commerce and transport consultants, Atkins.

Stakeholder Selection Process

High Power/ influence	Keep satisfied Engage and consult so they are satisfied their voices are being heard on key issues Avoid low value contact so they do not lose interest in the project Anticipate and meet need Could be a risk if not satisfied	Key players Involve in key decisions Engage regularly to maintain relationship lots of effort made to satisfy their concerns and requirements for information. These will be valuable advocates
	Minimal effort Communicate generally to keep updated Do not overload with excessive communications or needless information Monitor to check if interest levels change/issues arise	Keep informed Make use of interest – could be an ambassador Keep these stakeholders regularly informed to maintain their interest. Monitor any issues or concerns that may arise and respond
Low power/ influence	Low interest	High interest

Response overview

Citizens

- 612 complete public responses. The responses tended to be skewed more towards white, older males, which doesn't give a true representation of the demographic profile of the West Midlands.
- Responses were relatively well spread across the region (with a slight bias towards Birmingham) and reflected the proportion of car and non-car owners.
- Younger age groups were more likely to answer Motive for Change questions, with 25-44 year olds providing the most responses.
- This age group were also more likely to answer questions on the Climate Emergency - 93% of respondents chose this motive.

Business and Stakeholders

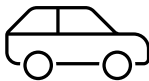
- Only 18 responses were received for the business and community survey.
- In the business and community survey, Tackling the Climate Emergency was the most engaged with Motive (15); Supporting Economic Success was also the least engaged with (9).

MROC

- 77 took part in Activity 2, with respondents more evenly distributed across all 7 districts.
- Responses have a greater gender balance compared to the LTP citizens survey.
- This activity also achieved a better age and ethnicity balance, although young adults and ethnic minorities are still underrepresented.

How have travel experiences changed over time?

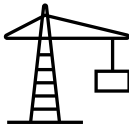
Most Significant Changes

1) More car use/ownership (43%) 

Business and community organisations also recognised this as the most significant change

2) Deterioration in public transport performance (23%) 

3) Improvement in public transport performance (16%) 

4) More out of town development (8%) 

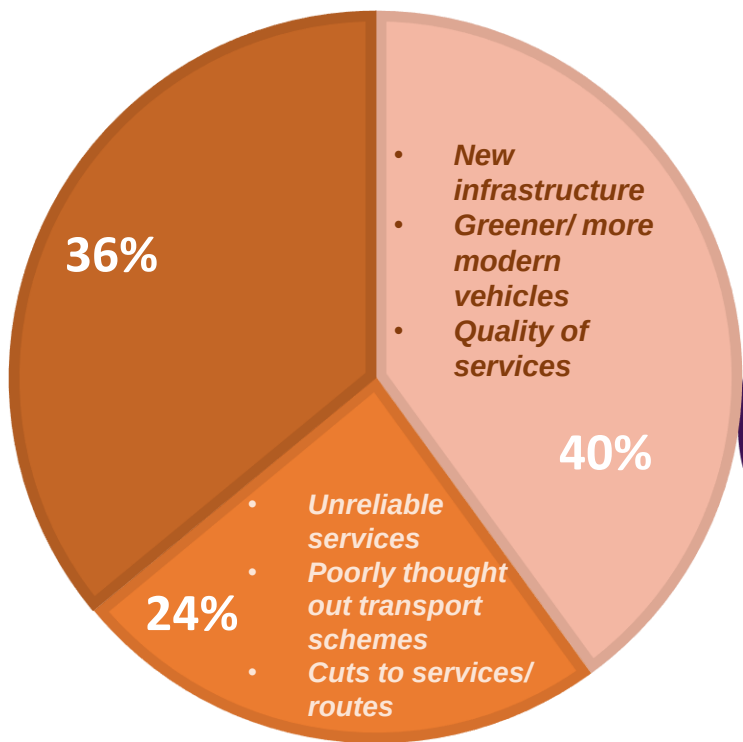
- People have witnessed significant changes to the transport system over their lifetimes; they were split on whether these changes were overly positive or negative, which could reflect the uneven distribution of benefits and impact across people and places.
- Whilst some have hugely benefited from increased mobility, freedom and choice, this has ultimately come at a price, with loss of green space, traffic, noise and pollution highlighted as key concerns.
- Over two-thirds of respondents thought traffic was a problem on local roads.

I can access places and areas I would never have been able to years ago.

Loss of green space, pollution, noise.

LOCAL TRANSPORT PERFORMANCE OVER TIME

■ Better ■ Worse ■ Unsure/No difference



Quick Poll Citizen Survey: Looking to the Future

Effect of pandemic on travel	%
Travelling by public transport less	25
Very little change/nothing/travelled as usual/key worker	23
Working from home	18
Travelling less in general	14
Increase car use	7

Tension between latest trends and future pathways?



What will change? (In the next 20 years)	%
Move to electric vehicles/less polluting fuels	36
More public transport use/better public transport offer	29
Reduction in car use/less car ownership	8
Unsure/don't know/depends on too many things	7
More active travel/cycling/cycle facilities	7

More of the same?

Positive changes to keep in the future	%
General comment about improvements needed to public transport in the future (not Covid related)	23
Being more active walking/cycling	15
Not commuting/more flexible working/working from home	12
None noted/hasn't changed things for me/nothing positive	8
Keep social distancing measures/Face mask/ventilation etc	6

Negative changes to avoid in the future	%
Increased car use/more traffic	20
Negative comments about public transport in general (not Covid related)	14
Reduction in amount of public transport services during Covid	12
Fear of using public transport/scared to use public transport	9
Not going out/isolation/restrictions	8

- In the Quick Poll Survey, 80% agree that without change to transport there will be negative consequences for the region; 17% of car owners disagreed compared to 6% of non car owners
- The main advantages to changes in the next 20 years would be a cleaner/less polluted environment (48%). With fewer cars on the roads (14%), an improved public transport offer (13%), with a healthier population (8%). However, 14% thought there would be no advantages
- The main disadvantage to changes in the next 20 years were seen as being the increased costs of travel (19%), others saw congestion continuing as EV cars simply replace current car types (10%), while 9% feared public transport would not be able to cope with increased demand or there was a lack of political will to make changes. 13% could see no disadvantages.

Perceptions of Living in a Car Free World

- Without access to cars, car owners were most concerned about not being able to see family and friends that live further afield
- Expressed frustration that they would be forced to use multiple forms of transport to reach their destination, would face longer journey times and could not complete activities
- Tended to evoke strong emotional responses; whilst many could see solution they would be very reluctant to follow through
- More importance was placed on the loses rather than the gains – 6 in 10 cited loss of independence and freedom, impact on wellbeing and reduced social circles and choice of destinations
- People would be less likely to travel to countryside further afield, travel around the UK, visit out of town retail parks and attractions that are not well connected by public transport.



Things People Would Miss the Most



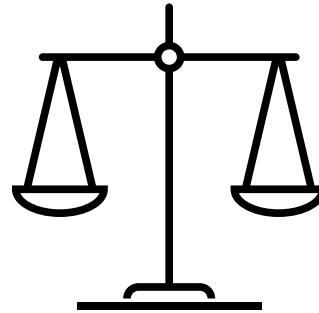
Family and friends



Option to be spontaneous



Freedom / independence



- There was a perception that a car free world could reduce inequality and make travel more accessible for all
- Non car drivers felt there could be an improvement if travel options were aimed at non-owners from the get go
- 4 in 10 said gains were important, namely environmental, road safety and health benefits
- People would be more inclined to stay local, visiting bars, restaurants, parks, high streets, museums and surrounding countryside.



[We'd be better off] If there were less cars on the road then I think it **would be better as less accidents, less traffic, less pollution.** However, to get less cars on the road **there needs to be incentives to use other forms of transport.** Male, 35-44, Coventry



Public Sentiments on Motives for Change

Most organisations saw 15-minute neighbourhoods as a good thing (8 out of 9), as it could lead to a reduction in traffic and help people realise healthier lifestyles. Citizens were also broadly supportive (78% of home owners and 80% of renters)

In terms of long-term changes, organisations were most in favour of redeveloping the urban realm, changing land use to put homes and services closer together, having a more extensive rail and rapid transport network and an ultra low emission fleet. Of least importance was connected/autonomous technology.

Business and community organisations broadly recognised the importance of having healthy and active workforces and that the urban environment for the West Midlands should support more active travel. Whilst 6 were already promoting active travel, 5 sighted the length of journeys as a key barrier, along with a lack of key infrastructure (3)

The majority of organisations agreed with the statement that the new transport plans should focus on rapidly changing how we travel (14 out of 17 respondents)

Business and community organisations were more likely to chose the ‘Decide and Provide’ approach (10 versus 2); however, 5 were unsure – one sighted the need for a blended approach, whilst another highlighting increased uncertainty in planning for the future, as proven by the Covid-19 pandemic

Business and community organisations were most concerned about changes to the way we travel (8 out of 15 respondents); responses were generally mixed, however they were less likely to be concerned by digital connectivity (7 out of 15)

Organisations thought the most important changes were shifting to walking, using local services, using the tram and avoiding travel by using telecommunications

Business and community organisations were more likely to chose the ‘Decide and Provide’ approach (10 versus 2); however, 5 were unsure – one sighted the need for a blended approach, whilst another highlighting increased uncertainty in planning for the future, as proven by the Covid-19 pandemic

Agreement that Climate Change Represents an Opportunity to Address the Following Motives for Change (%) – Citizen Responses

Motive for Change	Total	16-24	25-34	35-44	45-59	60 or over	Male	Female	Car access	No access
Becoming more active	77	50	85	90	75	75	73	85	78	77
Supporting local communities and places	76	66	78	90	72	75	68	85	73	82
Creating a fairer society	68	67	74	83	68	63	64	75	67	73
Sustaining economic success	56	66	52	63	60	52	53	61	54	61
Average	69	62	72	82	69	64	65	77	68	73

Public Perception and Understanding

- People broadly understood the issues outlined in the Motives for Change; *many respondents believed that without changes to the transport system, negative consequences would get worse and stifle regional success.*
- Respondents were very likely to consider climate change a key threat, with 92% expressing mild or serious concern.
- 83% agreed that a key policy aim should be to tackle inequalities in transport access.
- To combat the issues at hand, the vast majority of respondents agree that improving mobility of those who don't have access to a car is the best approach to ensure future prosperity.
- However, respondents were more split on whether to prioritise using existing network capacity and vehicles differently or building additional network capacity to achieve positive change.
- Respondents were more likely to perceive tackling climate change as a threat to the economic success.
- On average 69% saw it as an opportunity to achieve positive change across all Motives.
- 91% thought it was very important/important that we show leadership in tackling the climate change emergency by decarbonising transport (plus 12 out of 15 organisations).

Public and Business Consensus

- Respondents were broadly supportive of what the new LTP was proposing, despite tensions between advocating increased network capacity and using existing technology/infrastructure.
- Tensions on the recognition that reduced vehicle use are required.
- A significant minority of respondents who believed public transport needs to improve first for people to make the changes required.
- Non public transport users were more likely to disagree with or be unsure of the measures proposed, representing 25% of this group compared to just 14% overall. Respondents were also concerned about the effect rapid change would have on land use (65%) and the way people travel (58%).
- The most important short term changes were considered to be shifting to local bus, walking and rail, as well as using local services and consolidating trips.
- Longer term, respondents thought it was important to have more extensive rail and rapid transport, as well as high quality public realm and green infrastructure.
- Only 8% thought that there would be a reduction in car use in the next year 8 years, however 36% believed there would be a move to electric/less polluting vehicles
- Respondents thought that it was important that we demonstrated leadership in decarbonising transport.
- Businesses highlighted the importance of identifying clear critical paths to delivery and monitoring mechanisms.



MROC engagement and appetite for change

- Respondents highlighted the importance of convenience, flexibility and lack of alternative options as to why the public continue to prioritise the car.
- People do recognise the environmental and health benefits of public transport and active travel, however, 8 out of 10 respondents agreed that we need to use cars less. This further demonstrates a disconnect between what is seen as desirable and what is currently possible in terms of travel in the West Midlands .
- The car is still seen as desirable by a significant minority.
- Giving up the freedom and independence which the car provides is perceived as too heavy a price to pay, particularly regarding visiting family, friends and places of interest further afield.
- Changing private vehicles or moving to shared ownership were seen as the least impactful changes to the transport network by respondents to meet their personal needs.
- But just under half of respondents would consider using an alternative private vehicles – such as a moped, e-bike, e-scooter.
- 6 out of 10 respondents where either already making changes to their car use or were willing to do so in the future.
- Respondents highlighted replacing trips through digital connectivity, having goods delivered to your door and using more local services.
- Research highlights the importance of engaging with a diversity of residents and places and understanding their needs, informing them of the alternatives and understand which incentives to change would work.

How do stakeholder and public sentiments compare?

- Stakeholders recognise the issues, with climate change also seen as the key driver for change, but also physical activity.
- This reflects a broader focus on enabling a healthy, productive workforce (brought into sharp focus by the Covid-19 pandemic) and safeguarding economic success of the region
- Clear feedback that the public and stakeholder felt that the political system is not geared up to tackle some of the huge challenges.
- Perception that decision-making tend to favour short-termist solutions.
- There was a need to acknowledge the lifespan of the LTP last 5 years, as do political tenures.
- Achieving longer-term buy in remains a key challenge.
- This is reflected in strong consensus around LTP measures, but less confidence in the ability to successfully mandate these within the next 5 years.



Achieving change and policy implications

- To achieve the most difficult changes, there is a general consensus that this should be done through the decarbonising transport lens.
- Clear that the LTP needs to identify a clear critical path for policy and transport scheme delivery.
- There is also a need to ensure all seven constituent authorities are adequately consulted and that the new LTP does not contradict other Local Plans and other regionally significant infrastructure projects
- Much like the public responses, stakeholders are split on whether additional capacity should be built on the network, or that we need to make better use of the existing network and change travel behaviours.
- There was a shared view that public transport offering had to be adequate enough to allow people to make the changes required.
- Respondents are most confident around the 'shift' element of the LTP, enabled through changing land uses, improving public realm and expanding mass transit in the next 10 years.
- Demand management solutions will also be key, although certain mechanisms – such as road charging – are still seen as contentious.
- To achieve change through policy, 68% people in the Quick Poll survey **agreed with the use of 'sticks' to achieve significant change in travel behaviour.**



Transport for
West Midlands

Reimagining transport in the West Midlands:

Local Transport Plan Draft Core Strategy



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Throughout this document, particular statements have been highlighted in boxes like this one. These statements constitute the primary policies of this Local Transport Plan Core Strategy.

Please visit <https://www.tfwm.org.uk/who-we-are/our-strategy/WMLTP5> for further information about this draft LTP core strategy, including how to provide feedback on it and engage.

Also, please visit [our MROC website](#) if you want to register to be a part of our Market Research Online Community and have your say in a range of conversations about transport.

Foreword

As well as being at the heart of the UK’s transport network, the West Midlands is at another kind of crossroads; one at which there is an opportunity to build back better from the COVID-19 pandemic, to ensure we can carry forward the reputation for economic success the region has built in the new millennium while improving the impacts of transport on our towns, cities and local communities.

This document is the Core Strategy for the fifth Local Transport Plan (LTP) for the West Midlands. It sets out the overall aims, vision and approach to guide the development and delivery of transport policies until the end of 2041. The plan seeks to address the challenges and opportunities currently facing our transport system. The decisions we make now about how we plan, invest in and manage our transport system will affect us all, as well as deciding what legacy we leave for future generations.

Over the past few years, the West Midlands has seen substantial improvements to its transport network. The West Midlands Metro has been extended through Birmingham city centre and a new line is under construction in the Black Country, connecting Wednesbury with Brierley Hill. We are improving our railways, with improved and new stations planned at Perry Barr, Darlaston, Willenhall, Aldridge and the revival of the old Camp Hill line. Fleets of electric buses are taking to the streets in increasing numbers. And our active travel revolution is well underway, with new cycling and walking routes springing up across the region.

After decades of underinvestment, our region is

beginning to turn things around. But significant challenges remain in tackling the defining issues of our time, such as climate change, air quality, our health, and now our economic recovery from the pandemic. The climate emergency presents a particularly unique challenge in that there is a definitive pace of progress that needs to be made, otherwise we will lose the ability to prevent escalating harm.

To enable economic recovery means improving people’s access to opportunities. If we carry on our current path, trends suggest that we are heading towards a car-led recovery. That won’t help the over 25% of our households without access to a car, or the many others for whom car ownership is a huge part of household spend that they can ill afford. We also know the negative implications this has on health, safety, air quality and climate change. We therefore need a collective effort to tackle these issues and encourage people to change the way they travel.

Managing demand will be critical to enabling behaviour change, and will provide the means to improve alternative modes of travel. We want to create a transport system where these alternative modes become the automatic first choice for residents. Cars will be needed and will be a critical part of our transport system for many years. However, they don’t have to be the daily default choice that they are for many today. When needed they could more often and more easily be shared or drawn from a car club to get a safer zero emissions vehicle. This can save people money and help save the planet.

Whilst national policy measures do not currently address demand management, there are measures that are within our hands that we can implement at the local level now. Whilst some of these measures are considered more challenging and difficult to implement, we need to recognise the wider benefits that they can bring to local businesses, communities and residents.

We recognise that the plan will need to evolve and adapt over its lifetime, to account for changes to national policy and if it is going to meet the required outcomes. This Plan therefore proposes a new dynamic approach to transport planning in the West Midlands, and one that is in the hands of our communities. The Plan is focussed on 6 Big Moves which have been framed to target the benefits we want from a better transport system.

We will build on our City Regional Sustainable Transport Settlement (CRSTS) programme and have ensured that our 6 Big Moves and objectives align with this. The major infrastructure development within the first five years of this plan will be predominately be delivered through the CRSTS programme.

In developing proposals, we will be putting policies, measures and interventions to the people, to allow them to shape what they want the future to look like on their street.

So please engage and let us know what you think, so that together we can build a transport network that will serve our region for decades to come.



Andy Street
Mayor of the West Midlands



Councillor Ian Ward
Portfolio Lead for Transport
Leader of Birmingham City Council

Introduction

Our role

The West Midlands Combined Authority (WMCA) is a special type of local authority. Its statutory administrative functions apply to the seven metropolitan boroughs of the West Midlands. One of WMCA’s key statutory roles is being the Local Transport Authority and through Transport for West Midlands (TfWM) it must produce a Local Transport Plan (LTP) for the area.

The LTP must set out policies to promote safe, integrated, efficient and economic transport to, from and within the area as well as plans to implement those policies.

WMCA and the seven city and metropolitan borough authorities (councils) are legally required to deliver this plan through the use of all their powers and functions.



Transport is critical for a prosperous society. People need to travel, and goods need to be delivered. However, there are balances to be struck in how much the transport system can accommodate the diverse and competing needs of individuals and businesses.

The recent COVID-19 pandemic has hit the region hard. We need a transport system which will help get our region back on track and unleash its potential by improving access to opportunity for everyone. Transport systems can help economic growth by improving connections to workplaces and unlocking sites for development. It can also create more attractive places in which to do business and give more people access to the skills, education and training they need. The West Midlands economy supports a wide range of businesses from traditional manufacturers to hi-tech innovators and they all rely on transport.

The economic impact of the pandemic has been more severe in the West Midlands than elsewhere in the UK. That’s because much of the local economy relies on exports which went into decline as a result of the COVID-19 crisis. But our economy is resilient and has many strengths within certain sectors, including automotive, manufacturing, leisure and hospitality. These sectors will enable a strong and fast recovery to happen and it’s crucial that the transport system supports all sectors to recover.

But while making it easier to travel can help people access what they need to thrive and support economic growth, it can result in issues, such as emissions that pollute the air we breathe and cause climate change. The recent COP26 summit made it clear that we must urgently scale up action to respond to the threat of climate change to have a chance of limiting global warming. Transport is both a big part of the problem, but also a part of the solution. This plan highlights the need for urgent action to change things for the better.

There are also equality issues because transport might benefit some people whilst marginalising others. When planning transport, balances of the positive and negative impacts on people, communities and places need to be considered.

Our Green Paper ‘Reimagining Transport in the West Midlands’ started a conversation with people, business and key stakeholders on the challenges and opportunities facing the region, helping us to pin down what a better future transport system looks like and what we need to do to get there.

This document is the proposed Core Strategy for the fifth LTP for the West Midlands. It sets out the overall aims, vision and approach to guide the development and delivery of transport policies until the end of 2041.

Our Aims

Motives for Change

WMCA’s goal is to deliver a deliberate and socially purposeful kind of economic growth – measured not only by how fast or aggressive it is; but also by how well it is shared across the whole population and place, and the capacity of our environment to sustain it. This is Inclusive Growth.

Delivering Inclusive Growth will mean that we are meeting our social needs, economic ambitions and our responsibilities to the environment in a balanced way.

It also means that all citizens can shape, contribute and benefit from the advancement of the region.

Our objectives for this LTP (see right) are framed around 5 Motives for Change. These are five areas where changing transport could help us better support Inclusive Growth by improving the impacts of transport on people, and the places and environment on which they depend.



Motive for Change	Current issues	Objectives
Sustaining economic success	The West Midlands has experienced strong economic growth and investment in recent years; we want to leverage transport to sustain this success and to ensure everyone can benefit and participate.	Inclusive economy - We will inclusively grow our economy by making it easier to travel in a way that reduces the economic costs of transport’s negative impacts and maintaining the network, improves the reliability of the network, improves the health of the workforce, and levels up access to opportunities for those who are less mobile to enable greater participation in the economy.
		Mobility market transformation - We will support industrial transformation of the mobility sector to position the West Midlands as a global leader in future transport by creating a local transport market that enables innovation, development and deployment of transport products and services that best support Inclusive Growth.
Creating a fairer society	The way our urban environment has been retrofitted and developed to suit lifestyles that revolve around the car has resulted in significant disparities in access. Those without access to a car have fundamentally less access than those who can access a car. There are particular groups who are much less likely to have access to a car, including younger people, women, those who are on lower incomes and those from ethnic minority backgrounds.	Fair access - We will improve social mobility by improving equity of access to opportunity by ensuring everyone, regardless of personal circumstance, has safe, usable and affordable travel choices that enable them to prosper.
		Fair impacts - We will reduce the negative external effects of transport on people’s health and wellbeing by improving road safety, reducing air pollution, and reducing noise.
Supporting local communities and places	As traffic and car ownership have increased, motor vehicles have become increasingly dominant in our streets with the majority of space being made available on them. This has harmed the quality of places and limited opportunities to use streets for wider functions that can enrich people’s lives.	Local access - We will strengthen local communities and economies by improving local sustainable travel connectivity and removing severance within and between neighbourhoods by sustainable means to provide better access to local opportunities
		Streets for communities - We will strengthen communities by reducing the dominance of motor vehicles in local neighbourhoods to enable repurposing of streets.
Becoming more active	We can make our region more safe and convenient for walking and cycling to help people make more local trips and change how they’re making short trips. This is an opportunity to sustain healthier habits and support local economies. It will require changing the street environment to one where people feel safe with direct and convenient routes for travel without a car.	Physically active - Enable safe, convenient and accessible walking and cycling opportunities, to increase active travel for whole journeys or as part of journeys. This will improve the health, wellbeing and productivity of people today as well as leaving a healthy legacy for future generations
Tackling the climate emergency	WMCA has adopted an ambition for the region to be net-zero by 2041. Transport accounts for a large proportion of greenhouse gas emission across the region and reducing them is imperative. A lot of work is needed to change the way we travel and push towards greater electrification of our transport sector. Given the time that this will take, early momentum and action will be key to helping WMCA reach its net-zero target.	Transport Decarbonisation - We will protect the future of our own community as well as communities around the world from the effects of climate change by rapidly reducing transport carbon emissions at a rate consistent with WM2041*. *WMCA’s decarbonisation policies.

Reimagining Transport

Our economic and social success depends on what people and organisations can access. Physical mobility is only one factor that affects this; it is also affected by where we need to travel to and from, and whether we can remotely access opportunity using telecoms (such as the internet).

During the pandemic, our physical mobility was constrained in order to protect public health; for example we were told to stay at home where possible and not to travel across borders. We saw that people adapted by accessing what they needed more locally and by using technology to work from home, speak to their doctor, and order supplies to their home.

Building back better from the pandemic means we need to reduce the harmful impacts of transport on people, places and the environment, while ensuring we improve access equitably.

In determining how our LTP measures affect accessibility, we will seek to understand this by considering how accessibility is affected by the transport system, the way land is used and telecommunications.

The way we assess accessibility will not just account for the availability and qualities of infrastructure, it will also account for the capabilities and concerns of different people.

Even though access is affected by more than just transport, physical mobility is a key component of it. There are many ways of being mobile using today’s technologies that will help us address our Motives for Change and wider aims.

Aside from travelling less and increasing the segregation between people and traffic, there are two universal ways to reduce the impacts of vehicles and traffic:

- Use vehicles with higher occupancy; and/or
- Use more energy efficient vehicles (by reducing power, weight, and/or speed).

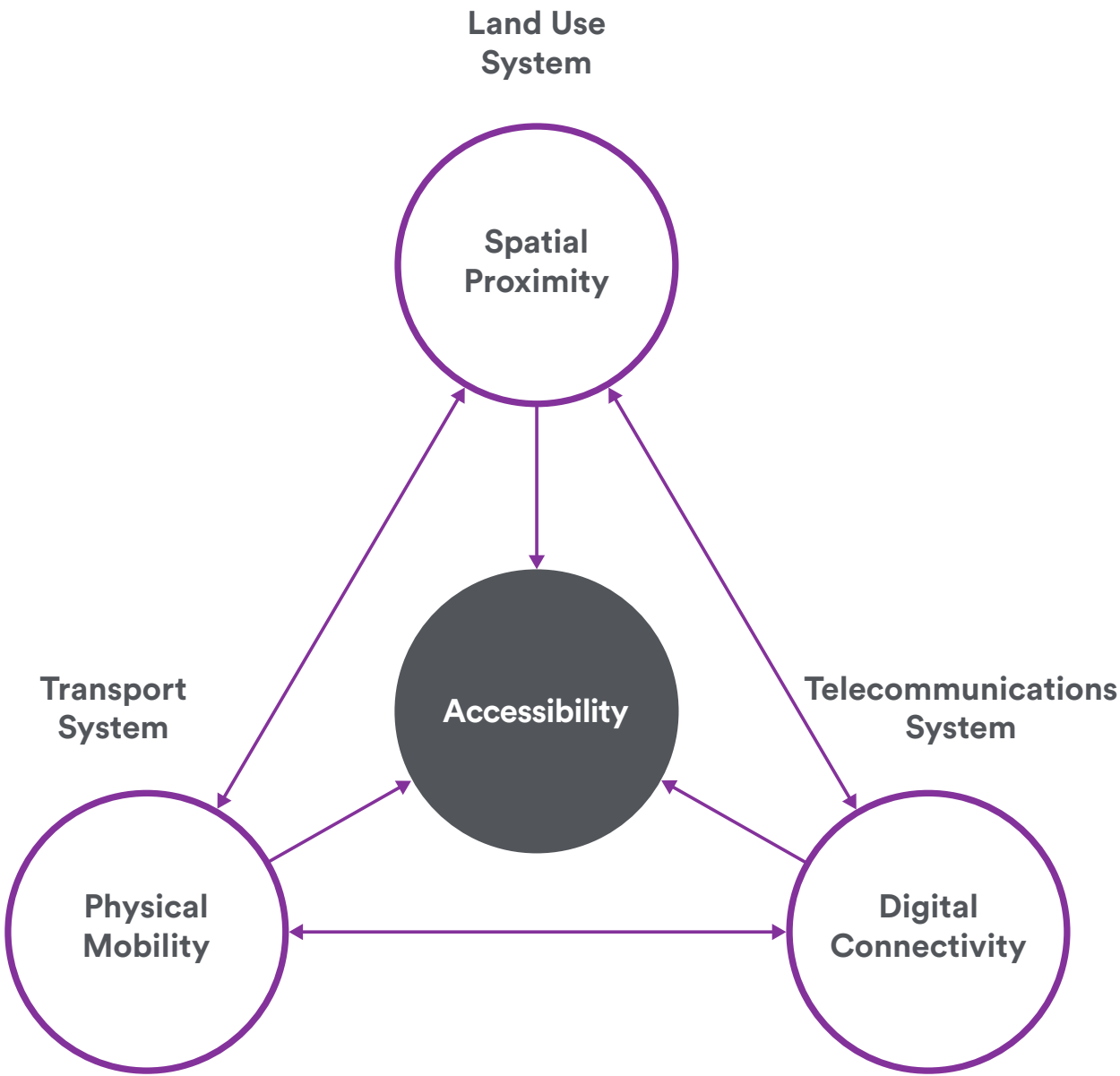
This provides us with a basic framework for our LTP of mobility options that can help us enhance our physical mobility to provide better access to opportunities whilst reducing the negative impacts of travel.

There are three primary changes to the transport system that will help us understand whether we have struck the right balance between providing access and managing the impacts of transport that is needed to address our Motives for Change.

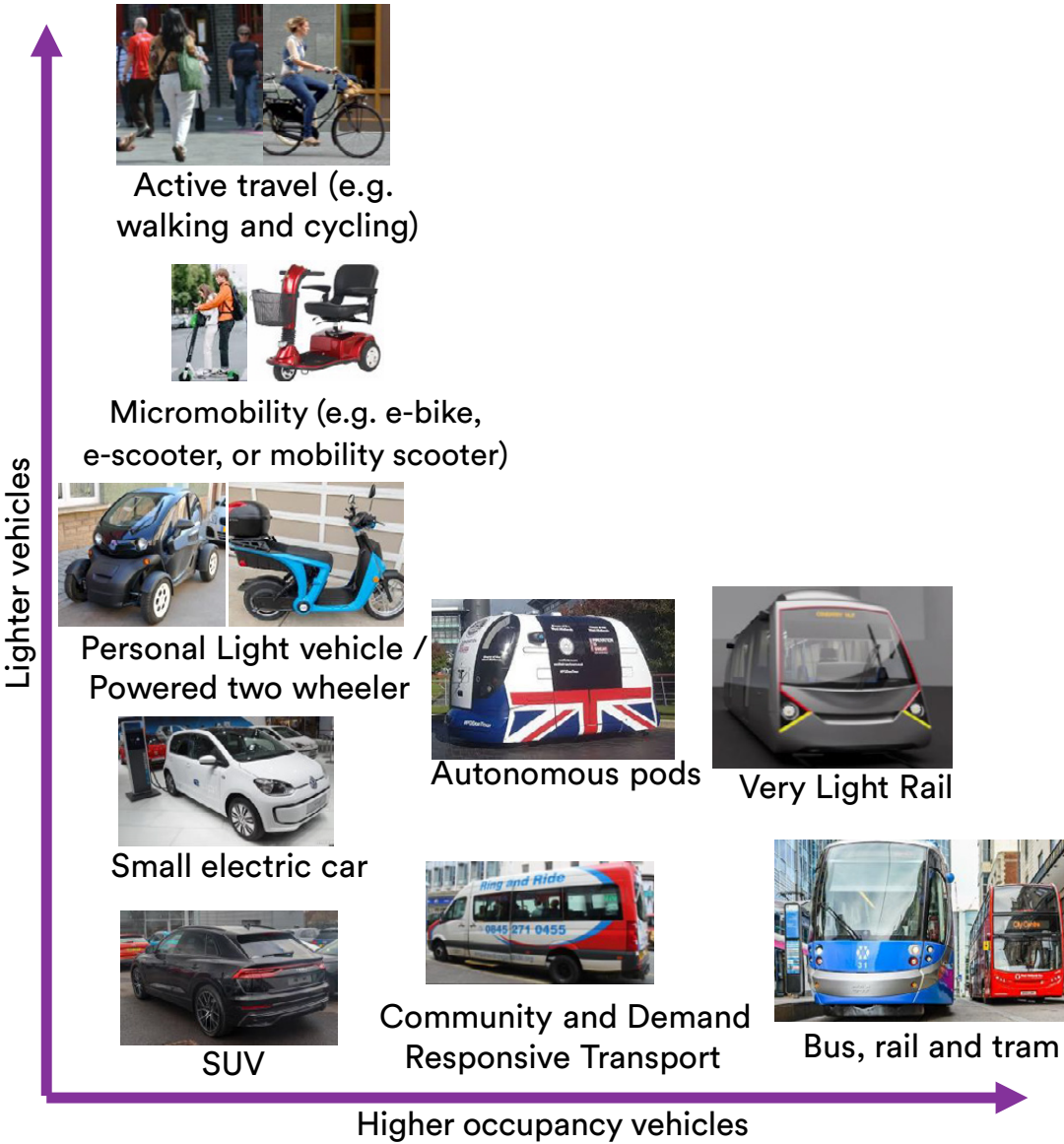


We have lots of options for accessing what we need

The “Triple Access System” describes how accessibility depends on transport, land use, and telecoms.



There are lots of options available to us for changing our means of travel without fundamentally compromising access. They are all based on using higher occupancy vehicles and/or vehicles that consume less energy.



Behaviour Change

The behaviour changes that are needed to make progress against our Motives for Change are described by the “avoid, shift, improve” framework. Our actions will be designed to result in behaviour change across this framework.

Avoid

Avoiding travel - for example by accessing services online and consolidating trips we make;

Shift

Shifting travel - to places that are more accessible by sustainable modes of transport, such as cycling, walking or public transport and travelling by those modes; and

Improve

Improve travel - by designing out emissions and other impacts from the vehicles we use and tailoring their use, for example by adopting zero emission vehicles (such as electric/hydrogen vehicles).

The need for behavioural change towards sustainable travel is not new, most people understand that our overreliance on cars has caused us issues and resolving these issues would mean using cars less. However, like eating right and exercising, this can be easier said than done in the region as it stands today.

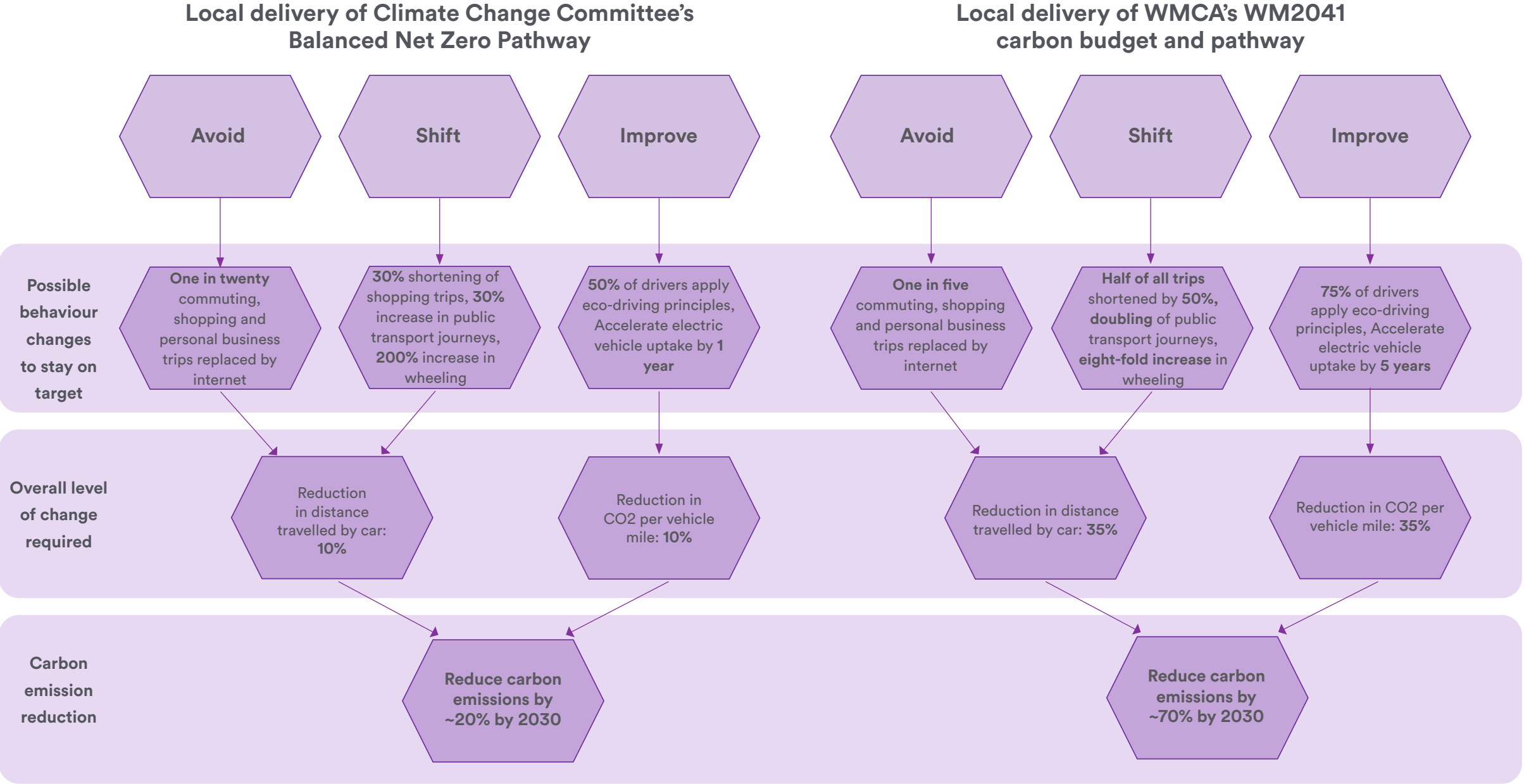
The climate emergency is a unique motive for us that makes the need for change more urgent; unlike our other motives, the global climate emergency is an issue which requires a definitive pace of progress, otherwise we will lose the ability to prevent escalating harm.



We have translated the need for urgency into the scale of change of behaviours that will need to be delivered in the next 10 years both to meet Government’s commitments and our local WM2041 commitments (see below). We will assess our progress against this scale of change as we deliver the LTP.

Before the pandemic distances travelled by cars were projected to increase by 15% between 2019 and 2031. The future is less certain now, however, demand to travel by car has recovered more than other modes. As our population grows and as the economy recovers it is expected that distances travelled by cars will continue to grow unless action is taken to change this.

Delivering a reduction in these distances will need us to disrupt long standing assumptions that economic growth and population growth go hand in hand with more car use. Even though these assumptions exist, there’s no fundamental reason why our region’s economy can’t grow without an increase in car travel; and it would be needed to deliver Inclusive Growth. We would have to do things differently to change course and this is part of building back better. However, national policy to manage demand using national not only local policy levers would be essential to this.



These required shifts for passenger travel are relative to travel demand and fleet composition predictions for 2030 and they are additional to key national policy proposals to stop the sale of petrol and diesel cars and vans by 2035.

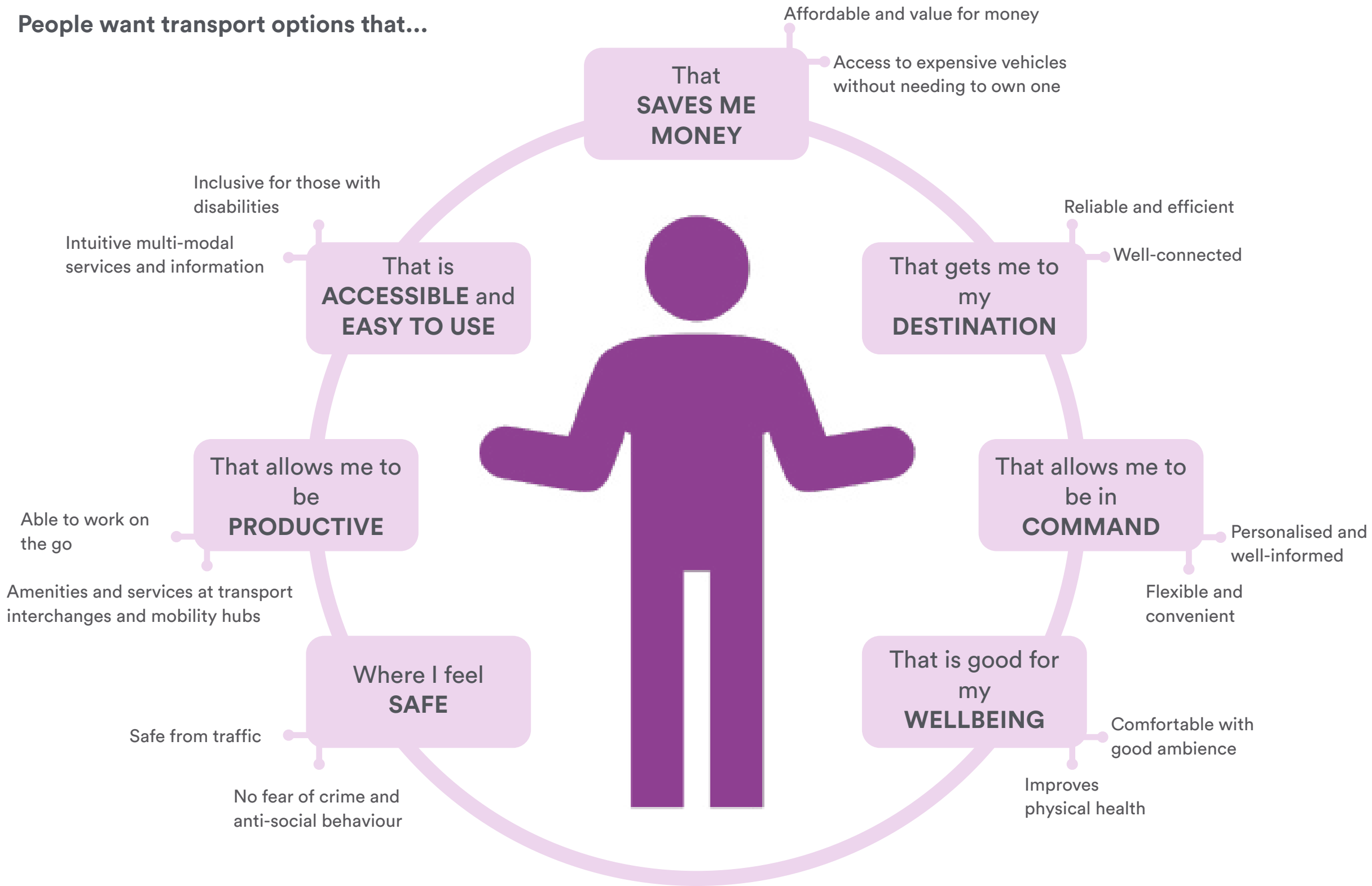
Citizen Focussed Mobility

It is important that this LTP delivers for the people of the West Midlands. From recent studies we have a good understanding on what factors influence the way people travel.

We acknowledge that these factors are important to travellers and will be accounted for throughout the development and delivery of the LTP and its implementation proposals.

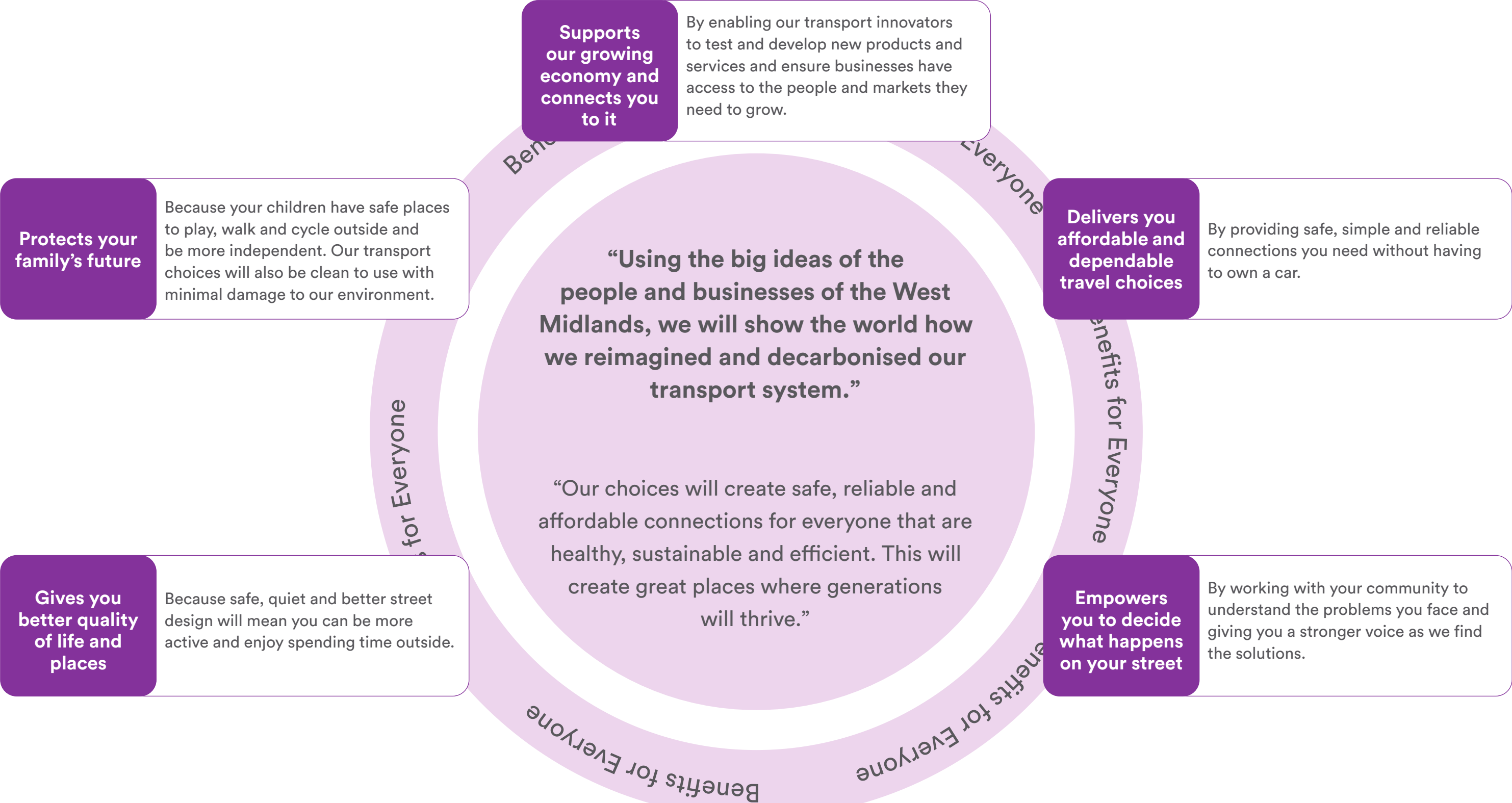
Achieving a good customer experience will be integral to the success of the proposed measures we wish to introduce as part of this LTP. This will help to influence consumer choice and make sustainable transport choices an obvious and viable option for travel.

People want transport options that...



The Vision

What we want to achieve for the people of the West Midlands



The vision for travel

Within the lifespan of this plan it is not envisioned that people will stop using cars, but a key aim is to reduce distances and trips made by car, and the more we do this, the better we address our aims.

However popular the car is, there are significant barriers to gaining access to one, including the costs of ownership, maintenance, insurance and gaining a driving licence. Similar issues apply to motorcycles.

Whilst we expect private motor vehicles to play an important role in our future transport system, we still envision a system where everyone can thrive without a driving licence and the need to own an expensive vehicle – a system that better caters for the 1 in 4 households in the West Midlands who do not have access to a car.

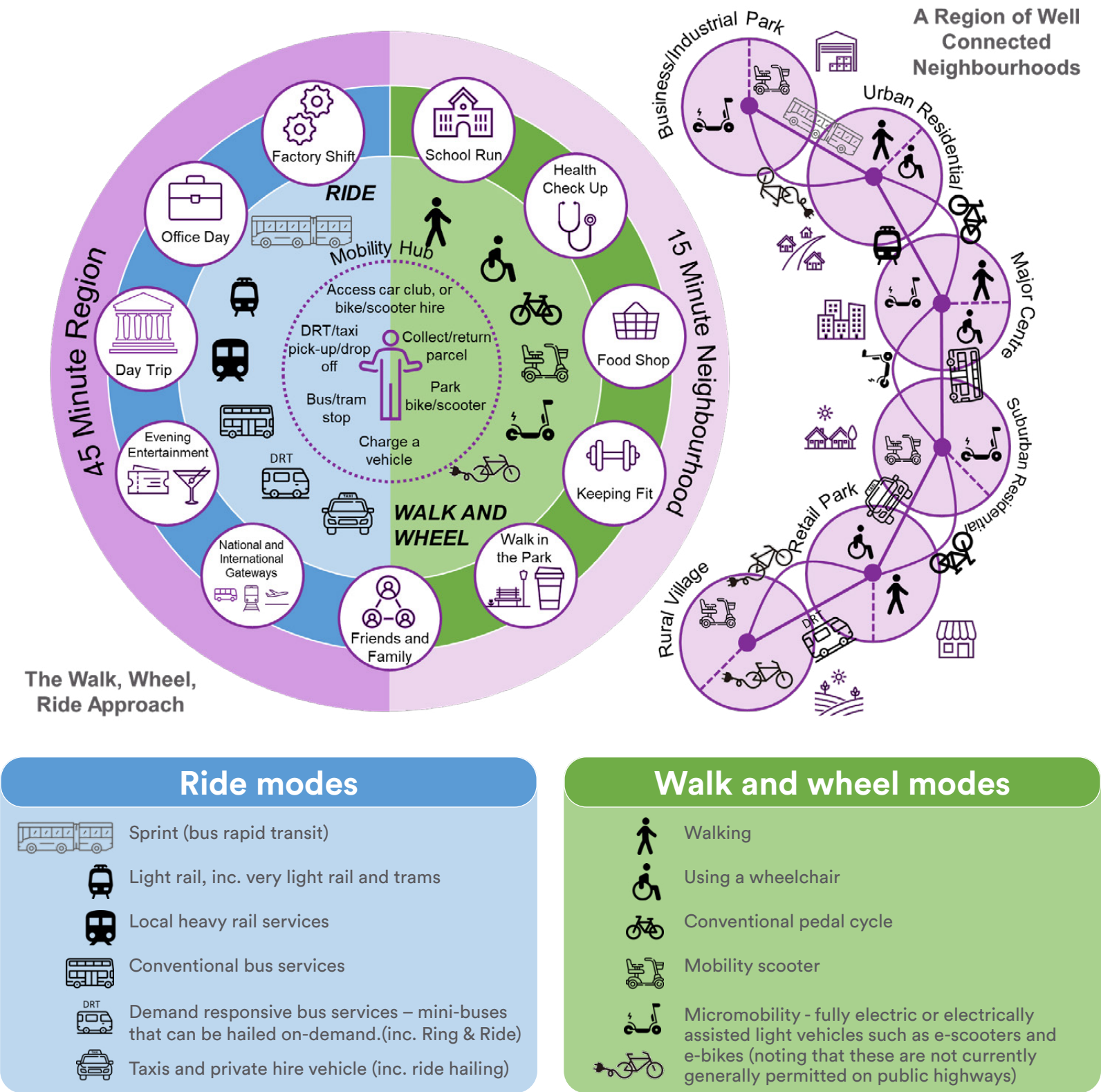
We have conceptualised what this could look like with our vision for 15 minute neighbourhoods within a 45 minute region. The vision is based on a combination of walking, wheeling and riding - travel options that require neither an expensive private vehicle or a full driving licence.

It means that a good range of services in our neighbourhoods can be accessed by “walking or wheeling” in a round trip of no more than 15 minutes, and a good range of places across our region to undertake work, leisure and socialising can be accessed by “ride” modes within a 45 minute trip.

These modes will be supported by options to access cars and vans without owning a vehicle and underpinned by mobility hubs that bring transport services together to create transport interchanges with greater amenity.

By creating well-designed walkable and wheelable neighbourhoods with appropriate mixes of land uses, connected through high quality public transport, we can create more healthy, liveable communities.

This vision is not meant to be prescriptive; we recognise that everyone travels for different reasons, to different places and using different modes, and places themselves are different meaning that what works in one neighbourhood might not work in another. But it does represent something to aim for where everyone will have decent options to access what they need.



City and Town Centres

Carry-on as we are

Congested centres which support some improvement in active travel and micromobility

- ZEVs now make up the majority of the fleet but cars still dominate the city centre
- Cycling has become more popular, though routes aren't segregated
- E-Scooters are popular but often come into conflict with pedestrians on the pavement
- Increased congestion through the city centre often means public transport services are delayed



Meet Anita..... she is 35 and lives in Bilston on the outskirts of Wolverhampton in a terraced house. Anita works part-time and is a single parent with two children. She works in the city centre at a shoe shop. Each day she has to drop off and pick up her children. She is often tired and frustrated as she is late picking up the children due to heavy traffic in the city centre.

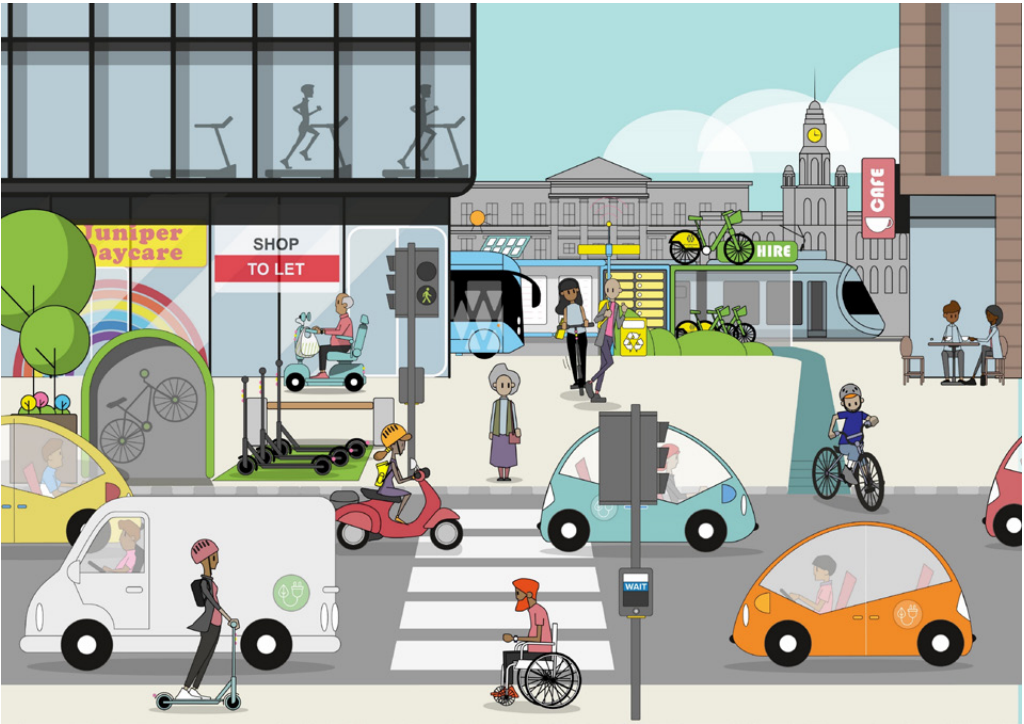
Vibrant centres which support diversity of activities and people

- Deliveries by cargo bikes or small electric vehicles
- Public transport efficiently connects to the region
- Digital working spreads transport demand more evenly throughout the day
- Space for active travel prioritised
- Reduced traffic makes for quieter and safer environment



In 2030, Anita has a new job at a sales company on the other side of the city. Previously, Anita would not have considered working that far away, but the electric bus is now much quicker due to priority bus lanes and there is less traffic on the road. This has opened up a lot of new opportunities for Anita. Anita switches to another electric bus at a mobility hub in the city centre where she picks up a coffee, which she gets for free from a voucher from her annual subscription to the TfWM app.

Change course



Local High Street

Carry-on as we are

Designed to accommodate the private car

- Street design remains unchanged with on-street parking and traffic running through the centre
- On-street electric vehicle charging points have increased, however this has made pavements more cluttered
- Cycling and micromobility has increased but this often comes into conflict with pedestrians on the pavement and traffic in the carriageway as there are no segregated routes



Meet... Silvia, she is 60 and lives in Dudley town centre in a flat. This morning she is frustrated as she has been waiting over 20 minutes for the bus, which means she is going to be late for her hospital. It begins to rain, so Silvia decides to hail a taxi as there is no shelter at the bus stop. Whilst waiting for the taxi, a teenager on a e-scooter nearly hits her as he is busy looking at his phone. Silvia chats to the taxi driver about how bad the traffic is getting in to the town centre and she eventually makes it to her hospital appointment 45 minutes late.

Designed for local activities

- Street design prioritises accessibility regardless of age or ability, green space, walking and public seating
- Local shops and services, and co-working spaces reduce the need for longer journeys
- Street connectivity is supported by active and shared travel, including bike and scooter hire, car cubs and ride hailing all accessible via one app
- Cargo delivery bikes are now a common sight



In 2030, Silvia decides to take a leisurely walk on her way back from her local community group. She stops at one of the benches along the way to admire all the bees that are attracted to the new planting that's been put in alongside the new area of shared space. Whilst sitting down, Silvia reflects on how nice it is to see more families walking and cycling in the town centre compared to a few years ago. She also reflects on how safe she now feels with far more people about.

Change course



Rural Living

Carry-on as we are

High car ownership and limited public transport options

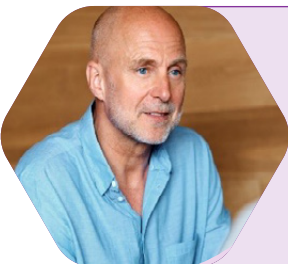
- Car ownership is very high with all houses having at least one car in the driveway, however most vehicles are now ZEVs
- Cycling still feels unsafe as the country lanes are badly lit and cars still drive very fast
- Lots of people choose to work from home as you now need to pay for parking in the city centre but the bus service does not provide a viable alternative
- Demand response transit provides access to local areas as an alternative to the bus



Meet... Marcus, he is 65 and lives in Hampton in Arden, Solihull in a detached house. Marcus is retired. Marcus is a proud owner of his diesel 4 × 4. Marcus loves cars and drives pretty much everywhere. This morning he is reading the newspaper which includes an article on electric cars. Marcus is aware that he may need to start thinking about switching to an electric vehicle at some point, but currently doesn't have any incentive to.

Connected and convenient

- Sustainable travel brings convenience, health benefit and reconnects people to nature
- Travel intensity is reduced by access to services online or nearby
- Active travel, taxis, and bus routes provides cleaner and more agile local connections
- Rural mobility hubs host zero emission community car hire and park and ride to quickly reach destinations
- Information is readily available to sustainably support lifestyle choices



In 2030 the ULEZ has been introduced, so Marcus has swapped his diesel car for an electric vehicle, which he can charge on his private driveway. Marcus' grandchildren are coming over for the afternoon and as it is a sunny day, he decides to take them into town. Due to the distance into town, Marcus has invested in a few electric bikes which he keeps in the garage. There is now a segregated cycle route, so Marcus does not feel nervous cycling with the children.

Change course



Modern Suburban Neighbourhood

Carry-on as we are

Car dominated neighbourhood

- Suburbs have changed very little, new housing continues to be built with the car owner in mind
- Public transport options are limited
- On-street parking on residential roads continues to be a problem
- Roads are not considered safe for pedestrians and cyclists as roads are used as a rat run to avoid congestion on the main roads
- E-scooters are popular with younger people to travel to local centres



Meet... the Thompsons, they live on the outskirts of Solihull in a semi-detached. Due to increased traffic on the main roads around Solihull, more drivers have taken to using the Thompson's neighbourhood as a rat-run. Peter and Sarah are particularly concerned about the safety of their local roads and do not feel comfortable letting the children walk or cycle to school. As they live in a relatively rural area, public transport provision is poor. They also don't like the children to play out on the street after school due to high levels of on-street parking on pavements and green verges.

Safe for living and working and playing

- Attractiveness is enhanced with spaces designed for health, wellbeing and recreation
- Working and shopping from home frees up time for family, friends and accessing local centres
- Community car clubs and less travel remove the need for car ownership
- Cost savings can be invested locally



In 2030, the Thompson's now live in a low traffic neighbourhood. Peter and Sarah now feel confident letting the children play in the street. Peter now works from home 3 days a week, and today he needs to go and pick up a parcel which is delivered to the parcel storage unit at the local community centre. He walks there in 5 minutes and is then back at home to start his virtual conference call at 9am. At the weekend, they are planning a trip down to London. For the Thompson family, planning ahead is essential. Sarah uses the TfWM app to buy tickets for all the family to get them from home to South Kensington tube station (including the bus, HS2 mainline and tube).

Change course



Older Urban Neighbourhood

Carry-on as we are

Cluttered Streets

- Pavements are cluttered as parking on the kerb continues
- Increase in the uptake of electric cars and vans but charging points make the pavements more cluttered
- Congestion through the neighbourhood continues and delivery vans often find it hard to park causing queuing
- There has been an Increase in uptake of cycling ad micromobility but there is often conflict with pedestrians on the pavement and traffic on the carriageway



Meet the Patels... they live in Aston in a semi-detached house. Pia and Raj work full-time with three children. The Patel parents, Pia and Raj are concerned about the safety of their son walking to school, so Pia takes him in the car. Pia struggles to find parking near the school so sometimes parks on the kerb while she takes him in. Recently, another Mum is frustrated as she has to walk in the road because she can't get her pushchair past all the parked cars on the pavement.

Social Streets

- Streets are designed for people to connect, including safe spaces for children to play
- Online shopping is delivered by cargo bike or electric van
- Bike lanes and public transport make it easy to travel further when necessary
- Car ownership reduces alongside the shift to ZEVs, with positive impacts on mental, physical health, and frees up space for other activities



The Patel's have now got three children and their youngest is still at primary school. They got rid one their cars and have switched their remaining one to a small electric car. The family didn't bother investing in a larger car as when they need one to go and visit family, they use a car club. Pia walks her youngest to school and is happy to let her scoot ahead as their street now falls within Aston's low traffic neighbourhood. There is still some parking outside the school, but you now need to pay to park so Pia would rather save the money and walk. It also means that she can get in 20 minutes of exercise before work.

Change course



Main Road

Carry-on as we are

Supporting highly trafficked main roads

- Congested main roads often with queues
- Lack of segregated bus routes which causes delays to services
- Emergency services often get stuck in traffic
- E-scooters are popular but lack of segregated route means they often conflict with pedestrians on the pavement



Meet... Sam, he is 22 and lives in Birmingham city centre. He lives in rented accommodation on a main road and is a junior nurse at Birmingham Children's Hospital. Today, when he wakes up it is raining, so he decides to catch the bus to work. There is a lot of traffic and he starts to become irritated as he is going to be late for his shift again. He sees an ambulance stuck in the traffic and becomes more frustrated as he knows how urgent it is for his colleagues to be able to get to patients quickly. At the end of his shift, it has stopped raining so he decides to take an e-scooter from the local hire facility near the hospital. He is very tired and nearly collides with an old man on the pavement.

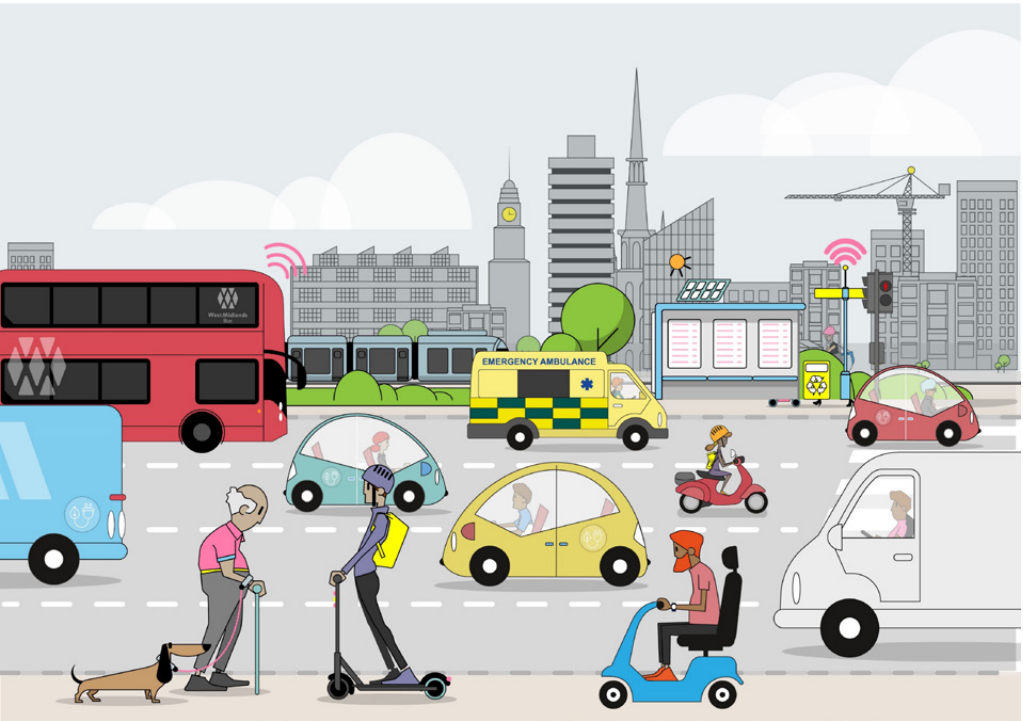
Supporting a broad range of mobility choices

- Walking, cycling, wheeling and public transport prioritised and connected to support personalised travel choices
- Quieter, cleaner and more accessible streets to support more dynamic workplaces and leisure activities
- Vehicles able to communicate with each other improves safety
- Pot holes are detected and fixed before they appear



In 2030, Sam has subscribed to the TfWM app and pays a subscription fee that gives him access to all modes of shared transport across the West Midlands. He has calculated that the convenience means he no longer needs to own a car. Sam travels to work based on the advice provided by the app on his phone – this can vary depending on his shift, the weather or any incidents in the area. He decides to cycle home from work today, and books via the TfWM app so that a bike is automatically reserved from this at the hospital. Sam cycles home on the dedicated cycle and walk greenway and drops the bike at the bike share hub nearest his home.

Change course



Our Approach

A plan that works for all places

The West Midlands is home to nearly 3 million people with a range of diverse communities and places; what works in a modern estate with driveways and cul-de-sacs might not work in a terraced street with no off-street parking, and what makes sense in a city centre might not make sense in a village’s high street.

We are clear that a “one size fits all” approach to delivering the strategy is therefore not appropriate. A range of solutions will need to be developed and tested, with engagement with local communities and businesses being an essential element of any new proposals.

Working in partnership with our local authorities **we will produce Area Strategies** for the Black Country, Birmingham, Solihull and Coventry to apply the policy principles and interventions of the Core Strategy with a more detailed understanding of places.

We will enable different plans to be drawn up for different places but we will foster and encourage collaboration to solve the problems in places that face similar challenges.

We will develop these strategies with local authorities, ensuring that the identification of the measures needed will be problem-led rather than solution-led.

Diversity of places

The way people travel is different in different places across our region. This is because of a complex range of factors relating to the people, function, form and setting of places. It’s important to understand that just as travel is different across the region today, it will be different in future. Our plans must reflect this.

There are many different kinds of places across our area. None of our boroughs are characterised by one kind of place; they all have a diversity of places within them. No two places are exactly alike, but there is commonality in different urban and rural environments found across our region. There are great opportunities to share learning and to develop solutions that can work across the region in places that share common features.



We will develop Area Strategies with local authorities, ensuring that the identification of the measures needed will be problem-led rather than solution-led.

Area strategies will include plans to solve the challenges of different kinds of places, covering:

- Neighbourhoods;
- Corridors; and
- Centres

Plans for these places will be based on a holistic understanding of the local context, including:

The people of places	who uses this place?
The function of places	what do people do here
The form of places	what are the key features of the urban environment?
The setting of places	How does this place relate to others around it?
The character of places	What are the natural and built environmental characteristics of this place to be enhanced/protected?



Birmingham

Birmingham is a city of over 1 million people that will continue to evolve with the arrival of High Speed 2 (HS2) and the realisation of plans detailed in ‘Our Future City Plan.’ For those travelling outside of the city centre car travel remains an important mode of travel whilst cycling and walking levels are improving following investment in active travel infrastructure. A Clean Air Zone was introduced in Birmingham City Centre in summer 2021 and this has helped to support the delivery of bus priority measures within the city centre and its radial routes.

Looking forward, Birmingham City Council published its Birmingham Transport Plan in 2021 which provides key principles for the evolution of transport in the city. The reallocation of roadspace away from private car together with parking and demand management measures aims to complement public transport and active travel improvements.



Black Country

The Black Country forms a distinctive sub-region on the western side of the West Midlands. The Black Country is an area of many towns and a city. The denseness of the urban area and the number of centres create particularly complex movement patterns and have led to a complicated transport network.

Travel by car remains very important, reflecting in part the complexity of the urban area and declining bus speeds. Targeted investment in the Key Route and Major Route networks remains a key focus to improve reliability alongside the incremental development of the public transport network required to improve multi-modal connectivity. Walking and cycling is lower in the Black Country compared to other areas of the West Midlands however planned investment aims to reduce short trips by car and increase physical activity.



Coventry

Coventry’s Local Plan details plans to stimulate growth and meet a growing demand for housing. This rapid growth could generate a significant level of travel demand, both within the city and to and from neighbouring areas.

Coventry is a city of 370,000 people that is largely dominated by car travel. Both the total number of cars owned by Coventry residents and the number of cars per household have been increasing steadily over the long-term. Although Coventry is a relatively compact city, the number of people walking and cycling is not as high as it could be.

Looking forward, the city seeks to place innovation at the heart of its plans for economic and environmental success. Initiatives such as Very Light Rail (VLR), Electric Bus City and an Urban Air Port will complement other plans for growth including a new Gigaport to support electric vehicle growth.



Solihull

Solihull has a population of over 215,000 residents across its urban and rural centres and villages. It has embarked on a strategy of ‘managed growth’ through the promotion of ‘UK Central’. Solihull Connected provides a transport strategy which will support future development and maximise the benefits of the arrival of HS2.

More than 60% of all journeys to work made by Solihull commuters are made by car and this is increasing. Given this current position, the ambition behind Solihull Connected is to plan for balanced investment in transport infrastructure that still caters for cars, while emphasising alternatives. Walking and Cycling activity is some of the highest in the West Midlands which provides a good foundation for further investment in infrastructure to promote greater use. Solihull Connected is now accompanied by a detailed Delivery Plan which sets out key investment priority areas.

A long term plan that doesn't lose sight of early opportunities

This is a twenty year plan, but it also focusses on the changes we can make today and the early benefits they can bring, as well as the actions that will take a long time to scale up over that period.

The climate emergency is a unique Motive because it has a particular urgency and definitive scale of action required. Around the world, people are trying to prevent 1.5-2°C warming which is predicted to occur by 2030. Avoiding this means emitting no more carbon emissions than our carbon budget allows. This means we need to reduce our transport carbon emissions now and not defer action to later years.

The switch to zero emission vehicles (ZEVs), whilst positive and important, will not deliver substantial reductions in carbon emissions until closer to that date and will not address our wider aims. Earlier behaviour change is essential for doing our bit to address the climate emergency for future generations, but could also help us meet wider aims sooner for the benefit of current generations.

Some things take longer to happen than others. It took hundreds of years to build our towns, cities villages, and neighbourhoods. We can, and should, ensure that new developments are built in a way that is better suited to our future vision for travel but it will take a long time for our built environment to be renewed in this way. Similarly, it takes a long time to change and deliver significant transport infrastructure changes across our region. It also takes time for new technologies to be developed and deployed safely (such as autonomous vehicles).

To successfully rapidly change we would need to

consider that even though many households do not have a car, the majority do. The current importance of independent mobility using a personal vehicle cannot be understated; in spite of current issues it is embedded in our culture, lifestyles and the way much of our built environment, economy and society is structured.

Rapid change is possible, and because of these factors it would likely need early actions that enable and encourage people to:

- Change the way that we use existing infrastructure, by making widespread small-scale changes to physical infrastructure supported by local highway regulations.
- Change how we use the buildings in our existing built environment so that people have better local provision of opportunities.
- Make best use of digital connectivity to access what we need without the negative impacts of transport.
- Use personal vehicles which have fewer impacts than cars (e.g. micromobility).
- Use road-based public transport such as buses and demand responsive transport.

These would be in addition to other actions that are focussed on longer term change.

What could change before 2030?

We can progress actions that have an impact before 2030 to meet our commitments to decarbonise and deliver rapid transformative improvements to address the other Motives for Change. However, there will also be actions we could take now that will take time to build and will have transformative impacts beyond 2030.

Avoiding travel

through digital connectivity

Shifting travel

by consolidating how goods and services are delivered; shifting shorter journeys to walking and wheeling and longer journeys to public transport (including demand responsive services) and supporting communication tools to make mode shift easier

Improve travel

by driving more efficiently using eco-driving techniques

And the long term?

Avoiding travel

though land use changes to existing and future areas to put homes, work, services and amenities closer to each other

Shifting travel

by redesigning streets and the public realm to encourage walking and cycling; by building new rail and rapid transport infrastructure to increase the journeys that could be made by public transport

Improve travel

by switching to ZEV technologies; and improving the efficiency and impacts of travel using connected and autonomous technologies

A plan to avoid a car-led recovery

Patterns of demand – why, when, how and where people travel – are likely to diverge significantly from trends before the pandemic. The shift to remote working and the increased role of e-commerce has been accelerated. The roles that big city and town centres and our local neighbourhoods play in our lives could well change because of this. The effect of these changes is likely to be more complex than a simple reduction in the amount of travel; we are likely to see that where travel for some reasons and between particular places may reduce, other kinds of travel demand may increase.

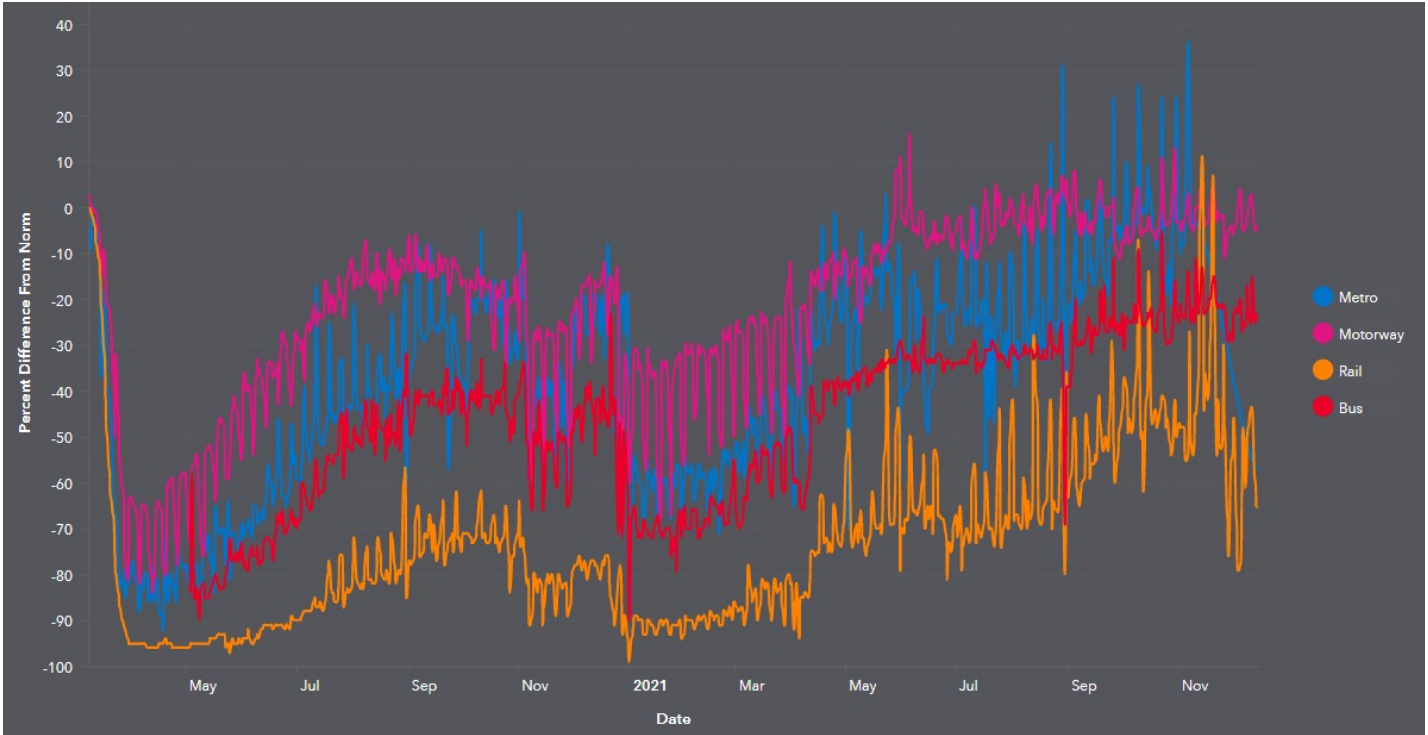
Public transport faces serious challenges ahead. As with many businesses, demand for services dropped during the pandemic. People have been specifically advised to avoid using public transport during the pandemic where possible to manage the spread of the virus. Maintaining service levels required greater public subsidy because there have been fewer fares collected.

There is a concern that as people have adopted new behaviours to avoid public transport where they can, these behaviours may persist after the pandemic is over. There are already signs that this will be the case; as lockdowns have relaxed, public transport has not recovered to the extent of car travel.

We are experiencing a “car-led recovery” something that the public, and local and national government has agreed should be avoided. Furthermore, much of the fare paying demand for public transport comes from regular commuting to and from busy centres. Persistence of remote working is likely to reduce demand for these services.

It is difficult to predict the long-term behavioural consequences of the pandemic, however, they will be influenced by public policies. There is a desire to “build back better” but doing so will require a conscious effort to do things differently.

Travel demand throughout the pandemic



Travel restrictions and social distancing have caused reductions in travel across all modes. Car use has consistently recovered more than public transport when restrictions have been lifted. Rail demand has remained particularly low.

If public transport is to play an important role to avoid a car-led recovery in the early stages of our plan then something will need to prevent services reducing.

Without wider policies to substantially increase recovery of demand for public transport, maintaining and growing public transport will require greater public subsidy than has currently been provided by Government and we will continue to make the case for this.

Recovery of demand for public transport will include changes to why, when, how and where people use public transport compared to it’s use before the pandemic.

A plan that makes an impact

Meeting the aims of this LTP doesn't just require an improvement to the options people have available to them to access what they need. It also relies on people using the options available to them differently, it requires people to change their behaviour.

It is a popular belief that before people can change their behaviour, they must have viable alternatives available to them. But in reality, things aren't so clear cut. For example, for cycling on local streets to become a safer option that people feel is viable, we would need people to change their behaviour so that those streets have less traffic. Also, if people change their behaviour so there is greater use of bus services, this can provide increased farebox revenues that operators can invest in more frequent services making use of the bus more viable. Behaviour change is often needed to make alternatives more viable.

Whilst behaviour change ultimately depends on individual choices, it is unfair and unrealistic to deflect all the responsibility for behaviour change onto individuals. A person might have a choice to cycle or drive, but they can't choose as an individual to reduce the traffic that puts them off cycling. A person might have a choice to take the bus or drive, but they can't choose as an individual for more people in their neighbourhood to take the bus so their fares can support more frequent services. That is why the way we govern the transport system is critical for behaviour change

Our current approach is focussed on improving alternatives to the car and informing travellers so they understand the benefits of using them. Continuing to invest in the alternatives is important and we will

continue to do this, but this alone won't be sufficient to generate the kinds of behaviour change needed to meet our aims.

We know from reviewing the impact of measures that have previously been progressed and modelling different future policy scenarios that the policies and programmes we have in place now won't deliver the scale and pace of change that we need to meet our aims. Furthermore, this would not change even if we had significantly higher levels of funding to deliver more investment in public transport and cycling infrastructure. We would not meet our WM2041 target for carbon reduction or even the UK 2050 climate change emissions targets, and we would continue to make marginal progress against the other issues raised in our Motives for Change.

There are two key limitations with only trying to improve alternatives without managing demand:

- Often measures to improve the alternatives require us to manage demand, for example when we need to reallocate space from general traffic or selectively restrict access to particular places to support public transport, walking and/or cycling. Avoiding these measures reduces the extent to which our efforts can improve the alternatives.
- There is a limit to how much mobility, comfort, and convenience these alternatives can offer in contrast to the mobility, comfort, and convenience the car can provide today. This means that even if we use every feasible option to improve the current alternatives to the car, they will still not be as attractive as car use is today.

Both of these key challenges mean that the current approach limits the extent to which we can provide better alternatives, and the extent to which behaviour change is likely to happen.

To achieve our aims and the vision – to change behaviours without compromising what people can access – simultaneous measures would be required to:

- Enable people to travel by better alternatives by **investing in measures that support better access** to what people need via these alternatives; and
- **Manage demand** by discouraging the behaviours we want to do less of using physical measures (such as allocating less space to particular vehicles), and regulatory measures (such as increasing the price of travel by particular means or restricting access to particular roads).



Enabling and Driving Choices – The Importance of Demand Management and Public Investment

To achieve the aims of the LTP, both demand management measures and public investment in the transport network will be vital. Demand management is critical for changing behaviours and shifting consumer spending on transport. Public investment in networks and services is critical for ensuring travel by alternative modes is safe and reliable. Implementing both demand management and public investment together is critical for improving the coverage, affordability and frequency of revenue dependent transport services such as public transport and car clubs.

Increasing policies to manage demand ➡		
Business as usual	Limited to local measures	Region/nationwide measures
Measures to manage demand are largely avoided. This limits the measures that can be progressed to improve walking, wheeling and riding which require reallocation of space.	Measures such as: low traffic neighbourhoods; local speed restrictions; parking management; road space reallocation to riding, walking and wheeling; and access restrictions and/or road user charges to centres are implemented.	Measures such as: national pavement parking ban, national road user pricing, increased fuel and vehicle tax, and more stringent regulation to limit the use of higher impact personal vehicles (e.g. SUVs)

Increasing policies to invest and enable walking, wheeling and riding 	Focus on public transport	Measures such as Sprint and wider bus priority schemes (bus lanes and gates); light rail delivery; heavy rail capacity improvement and station delivery (inc. HS2); subsidy for conventional and demand responsive bus services; and multi-modal fares and ticketing	More of the Same – access by non-car modes does not improve whilst overall car mileage increases across the region. Public transport reliability improvement is limited, and coverage and frequency remains unchanged. Reliable and safe – local public transport (particularly buses) become more reliable and streets are safer to walk and wheel. Mode shift occurs for trips to centres (but these are a minority of trips) and public transport services to centres become more frequent. More choice for those without – whilst people by and large continue to drive by car, the opportunities for those who cannot drive steps up as they are able to access the places that public transport cannot be sustained.	Sustainable but disconnected – demand management has a significant impact, reducing car use everywhere. Public transport coverage and frequency improves, and land uses become less car oriented. People’s lives become focused on where they can cycle to and travel to via public transport (they travel to fewer places). Particular communities in car-oriented urban environments become more isolated and under economic pressure as they struggle to maintain mobility through car ownership. Sustainable and connected – demand management has a significant impact, reducing car use everywhere. Public transport coverage and frequency improves, shared mobility service coverage improves, and land uses become less car oriented. However, the greater ability to wheel and access shared services better maintains the reach of people’s mobility helping to connect communities across the region.
	Broader focus to unlock micromobility and shared mobility services	Measures such as regulating to permit greater use of micromobility (inc. privately owned vehicles); car clubs, bike and scooter hire; and segregated and priority cycleways.		



A dynamic plan in the hands of communities

There is widespread awareness and support of the need to manage demand, but measures to manage demand are often divisive.

Government has acknowledged the need to manage demand in order to change behaviours to deliver its aims in its Transport Decarbonisation Plan, Bus Back Better and Gear Change strategies. It expects local authorities to explore and progress measures such as congestion charging, parking management, Low Traffic Neighbourhoods and reallocating space. Government may be less supportive of delivery of the measures within our LTP where our programmes do not include measures to manage demand.

Government has also acknowledged that there is a case to consider national road pricing as a possible measure to address the reduction in fuel duty as the use of fossil fuels in vehicles is phased out. Such a measure would have significant potential to support behaviour change across the whole of the country.

Government has not yet committed to manage demand through policy levers that are applied across the whole country, but it is likely that these will be required to deliver against national commitments to

Carrots

1 in 2 think better alternatives to driving need to exist first

It's not about making the car onsolete and making that a poorer item, but more of **making public transport the better alternative** as it offers way more personalised and more luxury items for the price we pay then owning a car.

16-24, Dudley, 2 cars in household, No licence

Sticks

1 in 2 think restrictions to driving need to be applied first

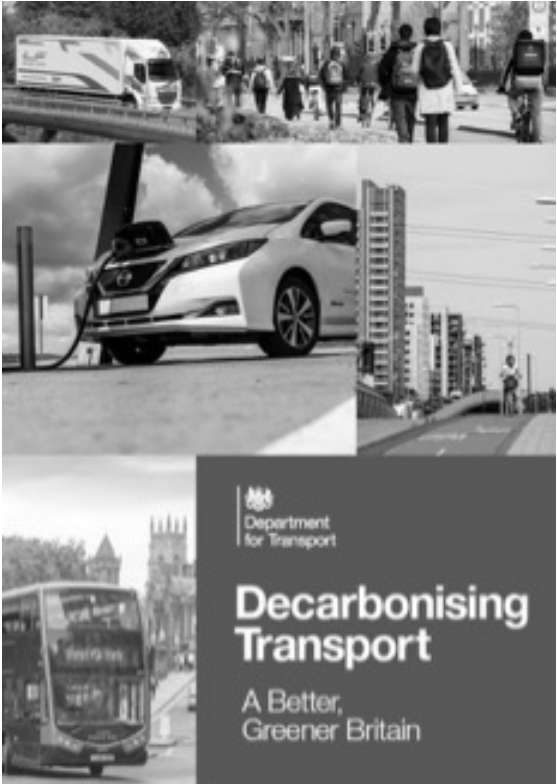
If any added financial expenses of making a car journey far outweigh the cost of making a journey by a workkable alternative method, I would chose the alternative option, even if the journey took longer.

45-65, Birmingham, 1 car in household, Driver

decarbonise and achieve their aim for half of all trips in urban areas to be made by active travel.

We will promote measures to manage demand through the deployment of this LTP alongside and as part of wider measures. Commitment to deliver such measures has to be conditional on public support. As we develop Area Strategies with our local authority partners, the plans for different places will need to account for support for measures to manage demand. This will require us to engage with the public to help them make informed choices over how the transport system is governed in their local area.

We can make progress where there is support to manage demand locally to deliver local benefits for communities such as quieter, safer streets and more reliable public transport. However, more significant behavioural changes that will generate widespread uplift in the demands for the alternatives to the car will depend on national action to manage demand. Our plan will also therefore need to remain dynamic to account for future national policy.



Government’s expectations

“Local authorities will have the power and ambition to make bold decisions to influence how people travel and take local action to make the best use of space to enable active travel, transform local public transport operations, ensure recharging and refuelling infrastructure meets local needs, consider appropriate parking or congestion management policies, initiate demand responsive travel, as well as promoting and supporting positive behaviour change through communications and education”

“We will drive decarbonisation and transport improvements at a local level by making quantifiable carbon reductions a fundamental part of local transport planning and funding”

Our LTP will be dynamic allowing us to make different choices over time and in different places according to:

- Local public appetite to manage demand
- National transport policies and guidance
- Monitoring and evaluation of local transport policy delivery and impacts; and
- Monitoring of external drivers of travel behaviours.

A plan that ensures a just transition

Equity is at the heart of our motives for change. If we achieve our aims, the harmful impacts of transport and places will be reduced, people who have no or limited access to a car today will be better able to participate in society and our economy, and a better legacy will be secured for future generations. There are many better ways of being more mobile and having better access without the harmful effects we experience today. There will be something that can work for everyone and everywhere. This is what our vision for transport is about, helping people access what they need without needing a driving licence and having to own an expensive vehicle.

However, even if our end goal is a fairer West Midlands, the process of change can have its own inequities. Sometimes communities that might stand to receive the greatest benefits can also face the biggest barriers in adapting.

Pace of change is something that needs to be balanced. If we try to progress change at a very gradual rate we continue to suffer with the problems we're trying to fix and the world around us might move on faster than we ourselves are trying to change it. There is a risk that we could move further from our goals rather than closer. But if change is progressed too fast then people and businesses will face difficulties in trying to adapt.

Change is not an easy process and we often fear it. However, our ability to adapt is often greater than we give ourselves credit for. The pandemic has shown this clearly; for the right cause and with willpower, we changed our social rules and everyone has found creative ways to carry on living their lives and doing

business. The struggle of the pandemic has been unquestionable, but we showed great capacity to adapt in the face of adversity. Nonetheless, the pandemic has also reminded us that some people face greater barriers to adapt than others.

We won't allow fear of change and the challenges of transitioning to paralyse us, but we will ensure a just transition by:

- Distributing the burden of change so those who face lesser barriers and who's behaviours have the greatest inequitable impacts make bigger changes;
- Targeting support towards those facing the greatest barriers with least capacity to overcome them themselves to help them adapt as we transition;
- Setting a pace of change that gives us the momentum we need but at a pace that enables people to adapt; and
- Adopting an innovative spirit to find new ways of accessing what we need that might better help particular groups and places overcome their barriers.

Our adaptability

Many of us can think of times where we've been intimidated by change ahead but have been able to reflect that "it wasn't so bad" on the other side. There are three key factors that can help us understand why we are often surprised by how well we adapt to a new set of circumstances even when we worry about change.

Practice makes perfect

People, organizations and whole industries learn to adapt to new ways of working following a surprisingly predictable pattern.

Individuals and organisations focused on the short-term are likely often to be unwilling to switch to "better" ways of working because the initial costs of switching will appear daunting even though they can decrease rapidly with practice

Better the devil you know

People and organisations tend to prefer the current status quo and are sceptical of deviating from it. But when circumstances change they tend to adapt quickly and adopt a new status quo. What's more, people then quickly become sceptical of deviating from the new status quo.

There are many reasons why this is the case but a simple way of thinking about it is that people invest in whatever circumstances they find themselves. Even if circumstances are not perfect, people spend time and energy in getting the most out of them and become familiar with them.

Social rules can change

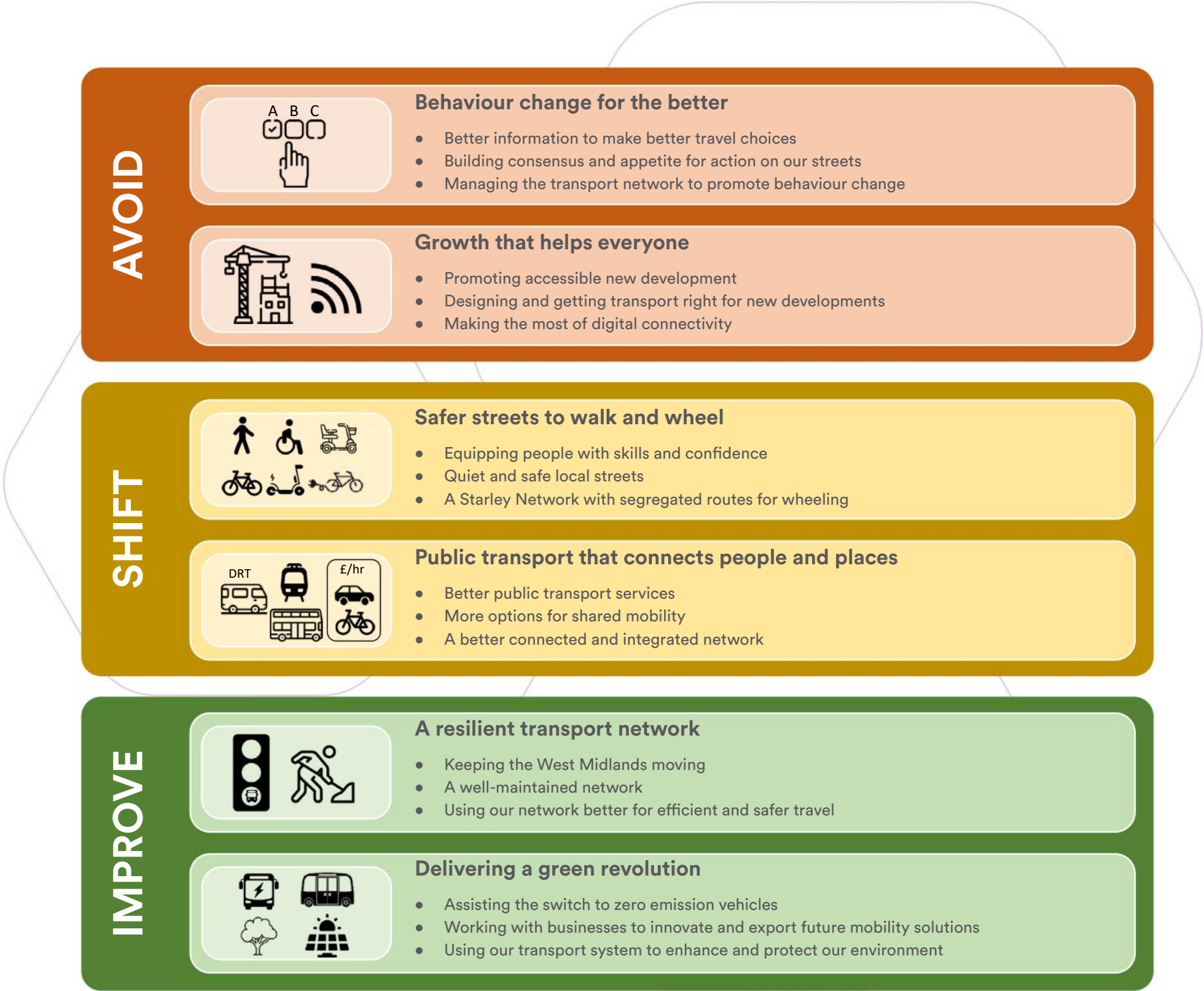
Social rules, what is considered normal and appropriate, have a very powerful influence over people's behaviour. There can be a very important rationale behind these rules but sometimes the original rationale for a rule we all follow becomes irrelevant/redundant. Changing these rules can help us overcome our challenges but can often feel uncomfortable.

Our Actions

6 big moves

The benefits we are targeting from a better transport system will be achieved by focusing on six ‘Big Moves’ which relate to the **avoid, shift, improve** framework. Making progress against these will require a sustained effort over 20 years or more.

An overview of each of the 6 Big Moves is presented on the following pages, Alongside the 4 Area Strategies, the LTP will be supported by 6 detailed strategies for the 6 Big Moves.



Behaviour change for the better

Behaviour change is at the heart of this strategy – it is essential to help us deliver against our carbon reduction targets but also to help make progress against our wider motives for change. All of the interventions set out in this strategy are aimed at improving our transport network and ultimately supporting behaviour change. There is a clear need for us all to think about our travel behaviours – we are all part of the problem and we all need to play a part in the solution.

Simply increasing highway capacity is not sustainable or physically practical. The impact of technology is ultimately limited and wider behaviour change will be required to ensure that transport emissions are reduced faster.

Beyond the infrastructure measures planned, there is considerable communications work needed to build and grow public awareness around the impacts of behaviours and choices and to help them make more appropriate choices.

We know that many people now agree that there is a need for more restrictive measures to help solve some of the transport challenges. Our local authorities hold the powers around traffic management, parking and planning and we will work with them to identify how and where further measures could be introduced to help deliver behaviour change across the region.



Meet Marcus, he is 65 and lives in Hampton in Arden, Solihull. At the weekend, Marcus visits his family who live in a low traffic neighbourhood in Birmingham. Whilst he can't park outside their house, it does mean that their street is safe to play in and his grandchildren are playing in a local pocket park when he arrives.



Better information to make better travel choices

Information is critical for helping people make the right decisions. We have already made significant progress in communicating transport information to the people who live and work in and visit the region. We have established recognisable brands across transport modes and services in the region. To drive public awareness of travel behaviours and choices we will further develop the TfWM brand as a key source of trusted, reliable information for transport information and journey planning.

We will broaden our communication and engagement to build on traditional information on public transport options and disruption and start to promote the role of shared mobility options, switching to zero emission vehicles, improving driver behaviour, promoting alternatives to travel and accessing services and mobility options differently.

Our customer information will be more targeted and impactful and we will use tools such as our traveller segmentation research, the West Midlands online transport engagement community engagement and further research to help us develop stronger, more effective campaigns. We will continue to build on the success of our Travel Demand Management programme to help more businesses better plan their use of our transport networks.

Managing the transport network to promote behaviour change

To deliver behaviour change at the scale and pace required we will promote a range of interventions and measures that influence the cost and convenience of different forms of transport to manage demand, which could include physical, regulatory and pricing mechanisms (the latter which can provide income to support transport investment and be tailored to encourage use of cleaner vehicles).

We will need to deliver bold roadspace allocation, such as segregated cycling routes and bus priority, and consider how to prioritise and balance the competing needs of modes within our highway network. Parking management and charges are also a key lever, including tools such as Workplace Parking Levies. Planning policy also provides a mechanism through which to manage the supply of parking and TfWM will work with local authorities to ensure that appropriate local planning policies are in place. Finally, we will work closely with Midlands Connect and the National Infrastructure Commission to explore the case for a national Road User Charging (RUC) scheme and promote Government action to progress this. This would help with driving behaviour change in a more holistic way across the UK and help address the loss of fuel tax as fossil fuels are phased out.

Building consensus and appetite for action on our streets

Engagement with the public and stakeholders is an essential part of the design and delivery of a new transport strategy. Activities cover everything from surveys tracking the performance of the transport system, to gathering feedback on new transport policy and strategy or commenting on major infrastructure proposals such as Sprint.

We have surveyed over 12,000 residents over five phases of engagement relating to travel behaviours during and after the pandemic. Separately, our quarterly Travel Trends and Behaviours Tracking Survey (TTABS) monitors travel patterns amongst local residents and their opinions on different modes of travel. We also engaged on our 'Reimagining Transport in the West Midlands' Green Paper, holding in depth discussion on key issues with our online community.

We will continue to develop our use of online communities and citizen assembly style forums to help us communicate, engage and build consensus on the most challenging issues and the measures that might need to be introduced. Engagement with the public will be critical for developing area strategies.

Behaviour change for the better – policy showcases

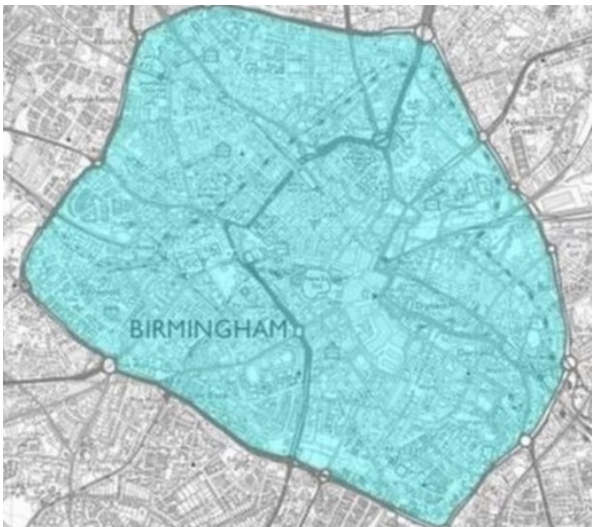
Controlled Parking Zones

Controlled Parking Zones (CPZ) are introduced as a means of managing on-street and off-street car parking, in order to safeguard the access needs of local residents, businesses and their visitors. By managing car parking effectively, additional streetspace can be freed up for pedestrians and cyclists to create a more pleasant environment.

Birmingham City Council has already introduced CPZs across the entirety of Birmingham City Centre, which encompasses every street within the A4540 Ring Road. This area has already seen significant transformation with the Clean Air Zone (CAZ) introduced. Nevertheless daily trips are forecast to increase by nearly 150,000 in the next 15 years.

In response, Birmingham City Council has removed all no-fee on-street parking within the entire zone and will not be issuing any further Resident or Business Permits in certain city centre quarters. Charging regimes have also been adapted to support short and medium stay uses, whilst discouraging long-stay and commuter parking. Replacement or new off-street parking will not be supported unless there is a clear gap in provision; existing facilities will be linked to the city’s traffic management system to provide real-time parking information and assist with wider network management.

Birmingham’s Controlled Parking Zone



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The Council is also looking to expand CPZs beyond the A4540 Ring Road into adjacent residential areas, to tackle displaced commuter parking which is becoming increasingly apparent since the introduction of the CAZ, as well as exploring the business case for a Workplace Parking Levy. This is a car parking management scheme which charges employers who provide workplace parking, to tackle issues such as peak time congestion, incentivise employers to manage work-based travel, as well as funding major transport schemes. Nottingham City Council have already successfully introduced this scheme, which has provided funding for tram extensions, redevelopment of the city’s station as well as improving Linkbus services to areas where rail and West Midlands Metro are not currently available.

Mobility Credits

Cost is often a significant barrier to people changing their travel behaviour, therefore Mobility Credits can offer an effective solution to overcome this.

The scheme is put in place to provide a financial incentive for people to scrap older, more polluting vehicles and get them using alternative forms of transport. In a national first, Coventry City Council launched a scheme in March 2021 where 74 residents received £3000 worth of credits for scrapping their personal vehicles. This was loaded onto a pre-paid card which could be used on public transport and other mobility services, included shared e-scooters, taxis, car clubs and car hire.

The scheme was put in place as part of a Department for Transport funded programme, where £22m was invested to trial new technologies that could support people to shift away from private car ownership and adopt more sustainable travel behaviours.

42% of participants gave up private car use altogether, by scrapping their only household vehicle. The majority of participants were aged 35-64 years old, although a fifth of respondents were aged over 65 years old.

Schools Restart Campaign

TfWM worked with its local authority partners to support students to return to school at the start of September 2020, following pandemic closures. The team identified that 100,000 students would need to return safely to 1,500 sites.

By developing an understanding of school travel patterns across the region, pinch points were identified to manage demand. TfWM and local authorities came together in regional workshops to work through the challenge. A strategy for managing the demand was developed with a focus on communications and engagement. Schools in ‘watch spot’ areas benefited from free travel planning and implemented active travel measures. Imperative in the solution was the partnership work that saw TfWM strengthen local transport, schools transport and and provision for those with Special Educational Needs and Disabilities (SEND). The public transport network was strengthened to accommodate social distancing and bus boarding figures were monitored daily.

Stay Safe  Stay Apart 

Drop off Differently this September

Planning to drive to school this September?
Consider parking or dropping off a few streets away from the school gates and walk the short distance.

- Great form of exercise suitable for all ages
- Saves you being stuck in traffic
- Keeps the roads safer around school
- Reduces the chance of collisions or injuries



For updates and more information on Back to School Travel, visit our dedicated web page: wmnetwork.co.uk/schooltravel



A toolkit with a range of communications materials was developed for the 1,500 schools. In March 2021 the campaign was refreshed with an updated toolkit, face-covering campaign, walking bubble maps and social media campaign with strong emphasis on active travel.

As a result, TfWM has been able to successfully manage operational issues and maintain functional capacity on local transport networks since September 2020.

Growth that helps everyone

Creating good, sustainable access to opportunities is critical to help us deliver inclusive growth; and to be successful, transport strategy needs to be supported by complementary land use policy. We need to build the right things in the right places with new developments planned and delivered in a way which supports progress against the LTP’s objectives.

90% of the built environment will substantially be the same at the end of the plan period. Therefore, whilst better land use planning and delivery will not fix the legacy challenge of over 50 years of planning geared around the car, it is critical to help us avoid perpetuating the problem.

Significant amounts of new housing and employment development is required in the metropolitan area and surrounding areas to accommodate the forecast population growth. Even with the new infrastructure associated with new developments, this growth will have implications for the wider transport network. In particular a key challenge will be mitigating the cumulative impacts of new development. Left unaddressed, the positive impact of regeneration and growth in the region is likely to be undermined or wiped out by unfettered traffic growth.

We must continue to improve how new development is planned, designed and delivered (in a coordinated way alongside wider transport policy) to help minimise transport impacts and maximise the attractiveness and success of sustainable modes.

This LTP promotes an approach which favours the use of brownfield land and supports higher density land uses with no or limited parking close to transport corridors and hubs. In turn this can help to deliver improved urban environments and crucially protect and reenergise our local centres.

We will need to be creative in how we provide more space for innovative solutions such as mobility hubs, car club facilities and ultra-rapid charging and residential on-street charging infrastructure.

Alongside better land use planning there is a need to consider the opportunities for digital connectivity to address some of the accessibility challenges which cannot be easily addressed by better transport. There has been a significant shift in demand towards home digital access and connectivity in recent years. Improving digital connectivity and addressing digital inclusion are key to supporting the communities and businesses of the West Midlands and their ability to work, upskill and learn from home whilst supporting reduced travel for work and other activities. In 2021 WMCA and its partners published the West Midlands Digital Roadmap taking an evidence-based approach to digital connectivity. The roadmap recognises the potential of digital technology to transform the regional economy and build economic resilience.



Meet... the Thompsons. In 2030, the Thompson family have moved to Arden Cross, a new neighbourhood with car free gateways. Peter and Sarah, can confidently let daughter Annabel cycle to school along low traffic local streets and the segregated blue cycle way that runs through the heart of the development. Sarah works a couple of days a week in London, and when she does, she travels part of the way with Annabel by e-scooter whilst on her way to the nearby HS2 Interchange Station, where it takes just 38 minutes to get to London. The family have local shops and places to eat and drink that they can walk to, they can use the nearby West Midlands Metro or Sprint services to go further afield in the urban area, and they can make use of the Arden Cross car club when they visit grandparents in Studley.

Promoting accessible new development

TfWM and WMCA will continue to support and promote a brownfield land first policy. It is acknowledged that there are challenges around the amount of development required and the ability for this to be met from brownfield land. However, if the region is to meet its net-zero targets for carbon reduction we will need to increase the use of sustainable modes for necessary travel with moves to focus development around high frequency public transport corridors and public transport interchanges. As such, the planning process is an important part of encouraging behaviour change and to help reduce the impacts of transport on communities and the environment.

Designing and getting transport right for new developments

Active, innovative and sustainable travel should be key elements considered in all new developments; minimising the impacts caused by single occupancy car usage. We need to encourage well-designed new developments which support mixed and sustainable communities with high levels of public transport usage as well as cycling and walking. We also seek to ensure that the cost of public transport, along with poor accessibility and availability are not prohibiting factors which prevents people moving into the region.

We will publish guidance to support developers, local planning authorities and local communities with information to assist developers in implementing transport infrastructure and services. The guidance will set out what measures TfWM has available to support developers in designing and implementing sustainable travel measures, together with how they can work with TfWM and local authorities to ensure the transport network is able to provide the support needed for developments to flourish and meet the wider needs of the West Midlands.

Making the most of digital connectivity

Digital connectivity presents a huge opportunity for improving access, however, there is also a risk that as society shifts more towards online systems, an inequality gap defined by digital skills and capability will widen, with some households becoming more excluded and isolated. To support the objectives of the LTP it will be important to develop and deliver high speed, reliable broadband and 5G connectivity to all communities and businesses within the West Midlands. Delivering enhanced digital infrastructure will help to reduce digital poverty and create a series of connected communities across the region that have equitable access to digital connectivity. We will work across the WMCA to better integrate digital accessibility, improving everyone's access to opportunities, particularly those in poverty.

Growth that helps everyone – policy showcases

Eastern Green, Coventry



Eastern Green in Coventry is a 435 acre, residential led mixed use urban extension, with a range of developers and local companies involved including Coventry City Council and Homes England.

The site will deliver significant housing numbers and associated employment, retail and community uses including 2250 new homes, 15ha employment land, a new major district centre, and primary schools. It will be served by extensive green infrastructure and public open space as well as good bus services and cycleways. A car club is also being explored together with our West Midlands Cycle Hire service to ensure active travel within and beyond the site. Mobility credits will also provided to families moving in, to help reduce car usage at the site and Very Light Rail is also being considered as part of the wider design of the site.

Icknield Port Loop

This development sees a multi-million-pound investment programme to drive forward new housing in central Birmingham.

Port Loop, when completed will see 43 acres of derelict industrial land transformed into a new 1,150-home waterside district featuring two, three and four-bedroom houses, apartments, public and communal green spaces, as well as excellent walking and cycling links throughout the development and beyond including along the Old Main Line Canal.

The Port Loop investment is the latest from the WMCA's devolved housing and regeneration programme – providing new homes, jobs and commercial floorspace while supporting the region's economic recovery and ambitions to be a net-zero carbon region over the next 20 years.

This site is also helping protect the Green Belt while creating new jobs and communities on brownfield land, with active travel and excellent transport links at the heart of the development.



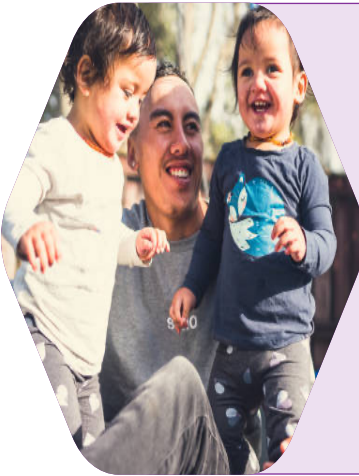
Safer streets to walk and wheel

We want to deliver a step change in the way people travel, to encourage a greater proportion of trips to be made by walking and wheeling. This is because active modes and micromobility provide significant benefits to people and their local streets and communities and are the most sustainable forms of transport.

Increasing the uptake of active modes and micromobility will have a positive impact on people’s physical health and mental wellbeing. Additionally, by making walking and wheeling more attractive, we seek to encourage the ‘shift’ away from traditional car trips. This can bring wider benefits such as a reduction in carbon emissions and improvements in local air quality, noise, safety and the local environment. Enabling people to walk and wheel will also improve people’s accessibility. Active modes and micromobility are more affordable and therefore more accessible for a range of social groups. The roll out of micromobility such as e-scooters and e-bikes will enable greater distances to be travelled, where previously the car would have been first choice. Also, micromobility will improve access for a wider range of potential users, including by older or less fit users that may have been put off by conventional active modes.

Making streets safer to walk and wheel will help us support Government’s target for half of all journeys in towns and cities to be walked or cycled by 2030, however, achieving this would also require other measures across our wider Big Moves, including demand management.

There is a role for e-cargo bikes and other modes of micromobility modes to help address the freight pressures we are seeing from the rise in online deliveries. E-cargo bikes are an affordable and sustainable method for making deliveries of locally produced and sold goods, or for making last mile deliveries from freight consolidation hubs located within towns and neighbourhood centres.



Meet.. The Patel family, they live in Aston, on the outskirts of Birmingham. At the weekend, The Patel family regularly go into the city to visit museums, shops, healthy fast food outlets etc and they use the nearby segregated cycle routes to get there. The streets are considered safe, clean and quiet with most cars now avoiding the city centre. The Patel’s now consider their neighbourhood to have a positive impact on their children’s physical and mental wellbeing.



Equipping people with skills and confidence

We will work with local authorities to provide a package of measures to support behaviour change. This will include accessible, reliable information on available routes, as well as incentives and rewards for reaching certain levels of walking and cycling activity. Schools and businesses will be encouraged to promote active travel by providing training to equip people with the skills to make these changes. To support the uptake of active and micromobility modes, we will promote the provision of supporting facilities to make these options more attractive. This will include secure parking facilities, storage, changing facilities and charging facilities.

Quiet and safe local streets

To promote the uptake of active modes and micromobility, we will make local streets more attractive by making them clean, quiet and safe. We will continue to invest and focus on road safety with a view to meeting an ambitious target of reducing the number of people killed or seriously injured on our roads by 50% by 2030 in line with the Towards Zero Foundation’s vision. Potential measures to be delivered as part of Low Traffic Neighbourhoods could include introducing filtered permeability, reducing speeds, and managing on-street parking on residential streets and local centres. We will also identify and address key severance issues within and between neighbourhoods.

A Starley Network with segregated routes for wheeling

We will ensure the delivery of our Starley Network. It is a network of cycling and walking routes that covers 500 miles of connected routes in the West Midlands. We will deliver a package of measures to provide cycle routes and towpaths, new pop-up cycle lanes, walking routes and walking zones in towns and cities. This will result in a high-quality network of walking and cycling corridors and public realm improvements in strategic centres, designed to Government standards.

Safer streets to walk and wheel – policy showcases

Low Traffic Neighbourhoods



Low Traffic Neighbourhoods (LTN's) are schemes which are designed in a way to limit the access of vehicular traffic to a street or collection of streets, in order to make them safer, easier and more appealing for cycling and walking.

Within the West Midlands, Birmingham City Council has trialled a number of LTN schemes across Kings Heath, Moseley, Bournville and Lozells as part of their Places for People initiative. Through use of the council's online engagement platform, residents, businesses and travellers in the area have been able to put forward their opinion on how each of these schemes is having an impact on the area. These are currently being reviewed.

Reactions to LTNs in Birmingham and across the UK has been mixed and sometimes divisive. In Walthamstow they have proved popular and have had a number of benefits such as reduced private car ownership and dependency and an increase in active travel.

Micromobility

Micromobility is a broad term used to describe personal light electrically powered vehicles that can be used for urban transport. E-scooters and e-bikes are generally well-known and understood to fall under this label, but there are other kinds of vehicles that offer different opportunities for different groups depending on their needs, helping to promote a more inclusive West Midlands in the future.

Micromobility provides more sustainable and affordable options for travel.

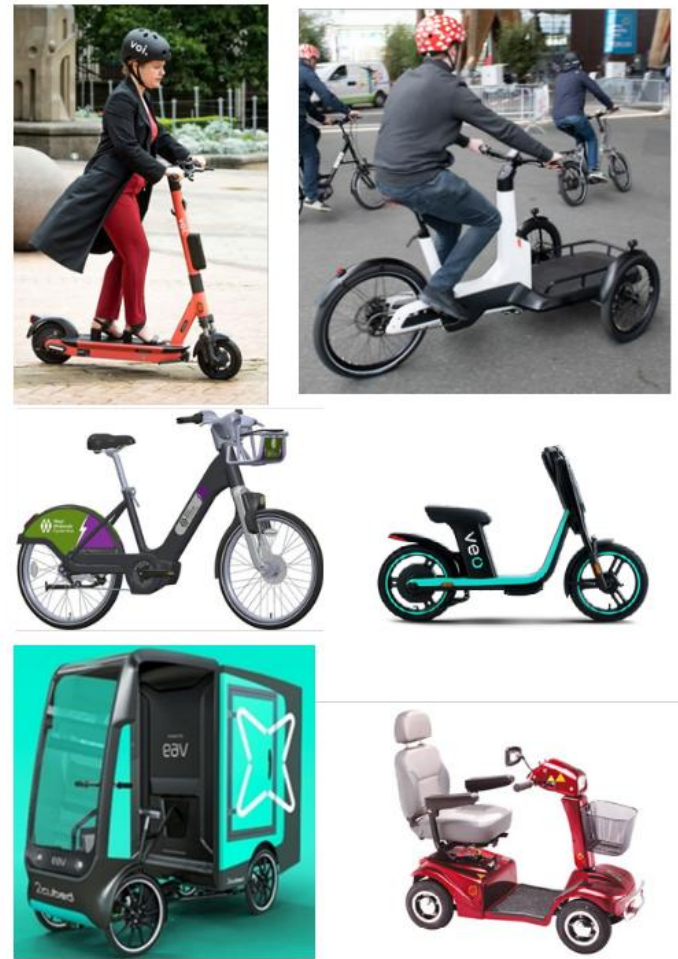
In the West Midlands we are currently trialling e-scooters in collaboration with VOI as this particular mode is growing in popularity across the region.

In Birmingham, 38% of VOI users would have otherwise travelled by car or taxi and 38% of users are now able to places they previously couldn't.

Although it is not yet legal to ride privately owned e-scooters, the government is currently reviewing legislation and it is possible that these kinds of vehicles will become more universally accepted in the UK in future.

We will continue to explore ways to introduce

more accessible types of micromobility as new technology enters the market and we will work to develop a roadmap to allow for the early adoption of these modes. We will continue to work with industry and governance to ensure that introduction of micromobility modes will represent a safe and sustainable way to travel.



Public transport that connects people and places

A safe, convenient, affordable and accessible public transport system is essential for enabling people to travel beyond their local neighbourhood without a car.

The West Midlands is at the heart of the UK’s rail network and has its own network of services providing connections with the wider region and beyond. Our West Midlands Metro network is steadily expanding along with planned Sprint (bus rapid transit) and Very Light Rail services. Before the COVID-19 pandemic the West Midlands had the largest commercial bus network in England (outside of London). Our Ring and Ride service is also a lifeline for citizens who need extra help moving around the West Midlands.

As well as public transport services, shared mobility services have begun to expand helping people access vehicles without needing to use or even own a personal vehicle – for example, helping them access a car for a few hours from a car club in their local neighbourhood or perhaps hiring an e-scooter or bike to get from the train station to the other side of town.

Through a combination of walking and wheeling and public transport connected by seamless interchange, everyone will be able to explore the places across our region

Public transport plays a critical role in many peoples’ lives today – particularly for the 1 in 4 households without a car. But in the future, public transport will need to play an even greater role in moving more people around the region and the country.

Because of the pace at which wide scale improvements to bus services can be made in comparison to rail and West Midlands Metro, rapid and early behaviour change in the LTP period will need to be supported by an increased role for and improvement of bus services. Our Bus Service Improvement Plan (BSIP) sets out a programme of bus investment to achieve this.



Meet... Anita she is 35 and lives in Bliston on the outskirts of Wolverhampton. At the weekend, Anita needs to take her two children to their grandparents so that they can stay over half term as she needs to work. Anita catches the tram to Birmingham where she puts them on the train to London on the new HS2 line. On her TfWM app she is able to create profiles for both her children. She only needs to buy one ticket for their whole journey and will be able to track their journey so she can check their journey and relax. Anita can use any device or card to pay and can relax safe in the knowledge at the end of the day no matter what combination of modes she has used she will never pay more than the lowest fare possible.

Better public transport services

We will invest in highway and rail infrastructure so as to enable public transport operators to provide more frequent, quicker and reliable services where demand can sustain those services. This will include providing greater priority on highways to buses, extending our West Midlands Metro, and improving rail capacity and delivering new stations in the West Midlands.

We will also prioritise revenue funding available to us to subsidise the most socially necessary public transport services where these services cannot be sustained by commercial demand. This will include providing subsidy for tendered bus services as well as exploring the opportunity to provide coverage using Demand Responsive Transport where high quality conventional bus services are not viable, and commissioning services such as Ring and Ride to support people who find it difficult or impossible to use conventional public transport.

More options for shared mobility

We will work with providers of shared mobility services such as car clubs, e-scooter and bike share schemes to provide infrastructure to support their operation where consumer demand can sustain them. These services will be particularly important as last mile solutions to travel where other options are not viable.

A better connected and integrated network

A public transport network can offer more to people than the sum of its component parts where services are better planned and people do not face penalties for moving between services and operators. We will seek to improve integration of public transport by investing in better interchange facilities, continuing to evolve our Swift multi-modal best value ticketing offer, and exploring how governance changes could enable TfWM to better influence service planning and network design.

With a more proactive and assertive role in the design of public transport networks and services TfWM could ensure they integrate, don't duplicate and provide the highest quality most reliable experience possible. In the first instance we will strengthen our relationship with bus operators through the Enhanced Partnership which we are currently developing whilst exploring further the business case for franchising in the longer-term.

We will work with West Midlands Police and Crime Commissioner, transport operators and wider partners to deliver the principles and priorities set out in the Police and Crime Plan to ensure everyone can feel and be safe when using public transport.

Public transport that connects people and places – policy showcases

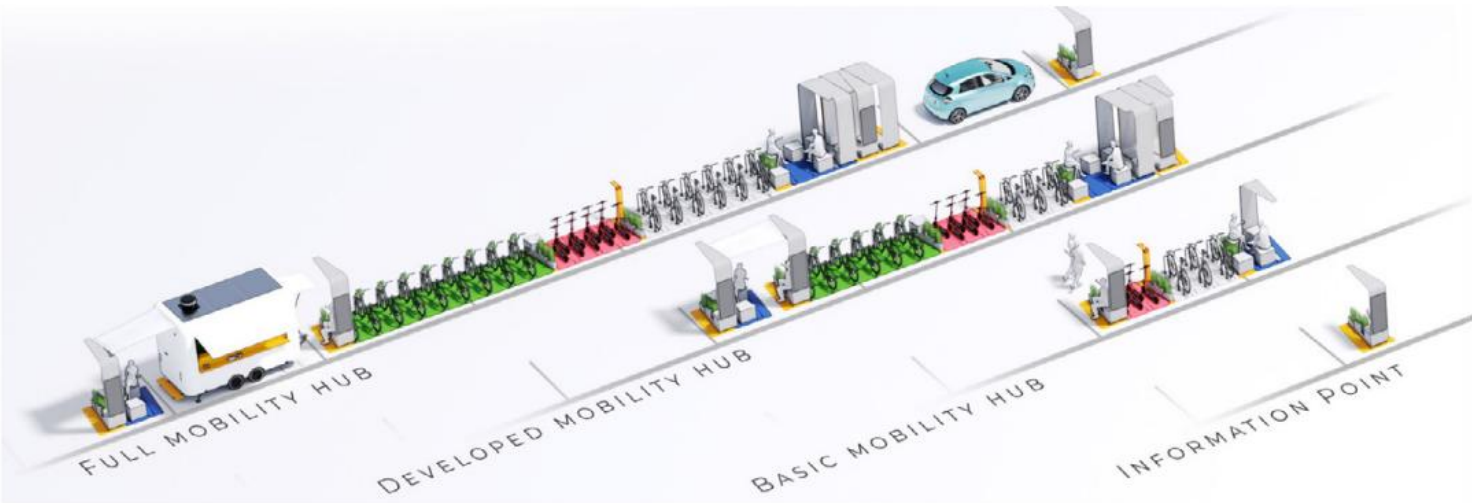
Mobility Hubs

The purpose of mobility hubs is to bring together various transport modes into one place. The aim is to allow universal ticketing across different modes to make multimodal travel more seamless.

It has become feasible in recent years to offer certain types of micromobility – in particular e-scooters and bike hire – as short distance transport options to the public. In the West Midlands we have now introduced bike hire and e-scooter hire, and these are proving to be very popular for commuters and visitors to our strategic centres.

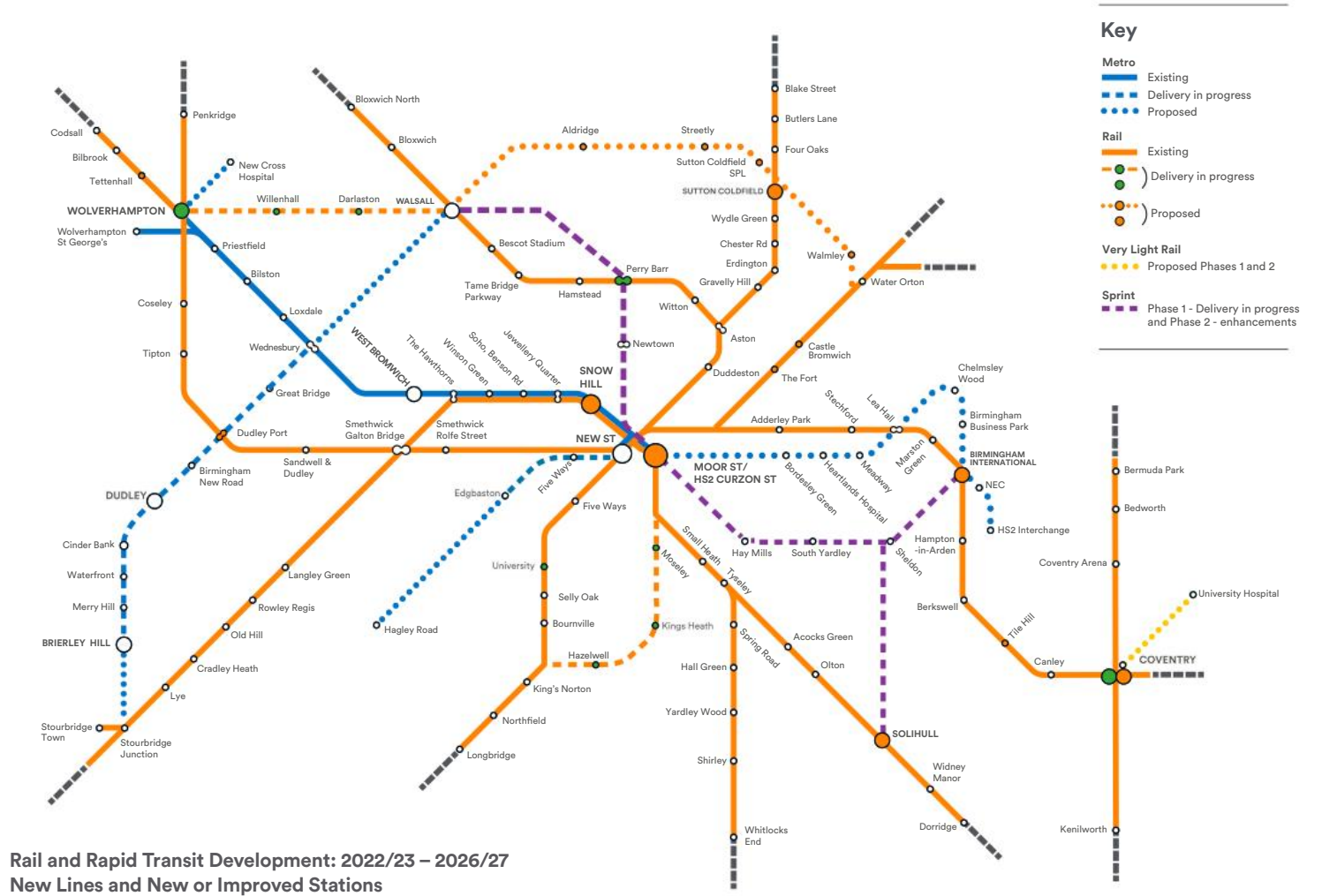
As we expand our charging infrastructure across the region there is also opportunity to bring together electric vehicles and even car share facilities at certain interchanges as part of our effort to encourage people to move away from private car ownership.

This can support those in society who do not own cars by providing last mile solutions to get from train stations and bus stops directly to desired destinations through micromobility and bike share, but also providing options for those in more rural regions through car share facilities. This supports a shift away from private car ownership by increasing convenience for users.



An Integrated Public Transport Network

The West Midlands public transport network will become a more integrated system, based on measures set out in the City Region Sustainable Transport Settlement and the Bus Service Improvement Plan. TfWM is currently considering international best practice to inform development of an integrated public transport network in the West Midlands.



A resilient transport network

Our streets and roads are the most important piece of transport infrastructure we have. Most trips take place on them whether it is by foot, bike, wheeling, micromobility, public transport or by car. Our streets and roads are also places, from local neighbourhood roads to busy high streets, and they play different roles in the lives of people and businesses.

The West Midlands has a Key Route Network (KRN) of 605km of key highways. Whilst consisting of only 7% of the actual roads, the KRN carries 50% of all traffic whilst serving the main demand flows of people, goods and services across the region and provides connections to the national strategic road network. Our KRN serves a range of travel demands and functions across a range of place types with different characteristics.

The local authorities play an invaluable role in developing, managing and operating this network, and on the surrounding local network, working closely with TfWM.

How we design and manage our streets, including the KRN, is important in helping to influence travel behaviours and to create good places.

We need to make our streets work for everyone by making the most efficient use of the network. This means ensuring our streets are in good condition and resilient to future climate change impacts. This will ensure our network is safe and reliable for all users.

We need a network which enables people and businesses to plan and go about their lives with confidence. We will also develop the network in a way that balances competing needs for space and encourages travel behaviours which will deliver our aims.



Meet... Sam, he is 22 and lives in Birmingham city centre. He lives in rented accommodation on a main road and is a junior nurse at Birmingham Children’s Hospital. At the weekend, Sam drives to see his girlfriend in Tewkesbury. He uses an app to give him the quickest route and variable message signs along the route to provide travel information about traffic congestion and advise him of the route he should take.



Keeping the West Midlands moving

We will continue to develop the Regional Transport Coordination Centre (RTCC) in partnership with local authorities, National Highways, West Midlands Police and operators to manage the network and incidents/major events. We will coordinate the delivery of the transport investment programme alongside utilities development plans and minimise impact through collaboration. We will coordinate schemes to avoid excessive disruption to our networks and to reduce costs where multiple schemes can be delivered simultaneously nearby (without excessive disruption).

We will invest in technology to help monitor performance and manage traffic and invest in communication and information tools to help us become a trusted source of travel advice and support travel behaviour change. We will build on the success of our Travel Demand Management programmes to encourage residents and businesses to re-mode, re-route, re-time or remove some journeys.

We will continue to invest in road safety to meet an ambitious target of reducing the number of people killed or seriously injured on our roads by 50% by 2030 in line with the Towards Zero vision. We will continue to work with the Strategic Road Safety Partnership to reduce and better manage road incidents. We will work with the local authorities and the West Midlands Police and Crime Commissioner to explore how reform of enforcement responsibilities for moving traffic offences could better support safe and efficient highways.

A well maintained network

We will work with our local authorities to support development and delivery of the region's transport infrastructure asset management strategies and plans, underpinned by robust digital asset management, to prevent the deterioration of main carriageways, structures and the unclassified network. We will seek to "dig once" where possible and seek to future proof schemes to minimise disruption and costs when further schemes are progressed (for example where bus priority schemes may be upgraded to Sprint and/or West Midlands Metro in future). As with network development, we will coordinate our maintenance and renewals with plans of utilities providers to maximise opportunity to minimise disruption.

We will ensure the risks of climate change on transport infrastructure across our region are understood and accounted for in plans to enhance, renew and maintain infrastructure.

Using our network for efficient and safe travel

The development of the West Midlands highway network will influence and be influenced by supporting strategies for active travel, public transport and delivering behaviour change. We will bring forward a series of multi-modal corridors and low traffic neighbourhoods that will deliver targeted road space re-allocation to support active travel and public transport and reduce the dominance of the car in residential areas. We will also address key pinch points which compromise overall public transport reliability or create safety problems. We will strengthen the key bus based rapid transit corridors that are at the heart of our overarching network strategy and focus on key multi-mode interchange points.

Many of the biggest challenges will be on the KRN and we will work with our local authorities to create a framework to help us to monitor its performance and contribution towards the LTP's objectives.

A resilient transport network – policy showcases

LODE LANE ROUTE ENHANCEMENT

Lode Lane is a key corridor providing access to over 20,000 job roles in Solihull Town Centre and at Jaguar Land Rover, as well as wider access to Birmingham Airport, the NEC and the UK Central Hub.

Lode Lane is one of the busiest bus corridors in the region, generating a bus every two minutes during peak periods which carry more people into Solihull Town Centre during mornings than in cars.

A comprehensive route intervention was delivered between Jaguar Land Rover and Solihull Town Centre, including new bus lanes and bus priority at junctions. Critically, the scheme was delivered by maximising existing road space with no loss of service to general traffic.

The scheme opened in October 2016 and has achieved a 45% reduction in bus journey times in the morning peak hour into Solihull Town Centre. Bus patronage increased by 11%, and there is now an enhanced environment for pedestrians and cyclists.

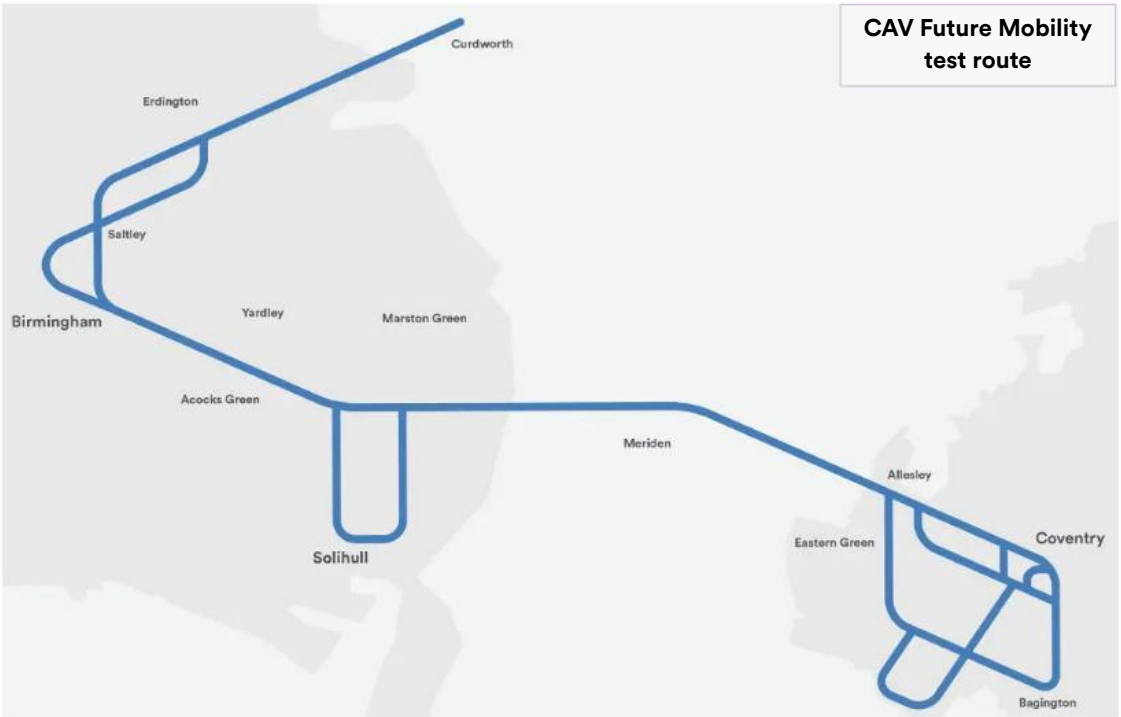


Wireless Infrastructure Project / CAV Infrastructure

To improve the safety and efficiency of our roads we are introducing and installing hundreds of sensors across the network which will be able to facilitate fast communications across the network. Sensors will provide a breadth of useful information which can be used to make smart decisions about traffic management as well as relaying integral information to road users.

By updating the network in this way, we can work closely with our external stakeholders such as emergency services to provide safer roads, faster response times and improved data about the network.

This work is future proofing our region in advance of predicted changes which will be seen to our transport system. As society transitions to connected and autonomous vehicles (CAVs) we need to ensure that our infrastructure is fit for purpose.

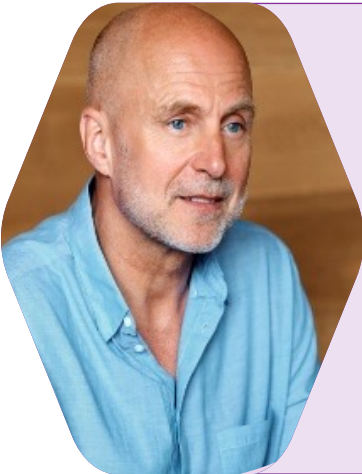


Delivering a green revolution

Delivering a green revolution through our LTP means partnership working between the public and private sector to leverage our transport system to enhance our built and natural environment, in a way that stimulates our local industry to produce the products and services that support inclusive growth.

We will aim to decarbonise the West Midland’s private and public fleets by moving away from conventional and hybrid fossil fuel vehicles to zero emission alternatives. This will be critical to reducing emissions associated with transport and will also help to improve local air quality and reduce noise pollution. Our automotive industry is well placed to support this aim.

But transport innovation in the West Midlands, goes beyond making cars and we also have wider sector mobility strengths in products such as public transport, connected and autonomous vehicles, 5G, Mobility as a Service and modern infrastructure construction techniques.



Meet Marcus, he is 65 and lives in Hampton in Arden, Solihull. When Marcus visits his family in a low traffic neighbourhood in Birmingham, he parks his car in a nearby mobility hub and so takes advantage of the charging facilities there. Whilst plugging in his car, he reads the notice explaining that all that the electricity is generated from the solar panels on the roof of the mobility hub. Marcus talks with his son later that day about hiring a couple of e-bikes next time he visits to go round the local nature centre.



Assisting the switch to zero emission vehicles

We will work with partners, including local authorities and businesses across the region to ensure that the West Midlands’s fleet moves to zero emission vehicles (ZEVs) as quickly and efficiently as possible, choosing the most suitable zero emission technologies (including a short-term role for low carbon fuels where zero emission technologies are less feasible within the next decade). We will help local authorities to plan and enable appropriate charging and fuelling infrastructure to be implemented, that is appropriate to the needs and characteristics of different places and avoids street clutter.

The provision and locations of charging stations will be strategically planned including on the key route network and strategic road network for HGVs and LGVs, but also at mobility hubs to provide easy access to other greener modes of transport (e.g. car clubs and e-scooters) and to provide charging for cars where private provision with off-street parking is unavailable. We will also work with our bus operators to support them with the adoption of hydrogen and/or electric buses where appropriate, understanding a particular need for electric vehicle charging en-route where charging in depots is insufficient.

Working with businesses to innovate and export future mobility solutions

We will work with partners, including local authorities and businesses across the region to understand how innovation in the mobility sector can support our aims, and to support the development and trialling of new solutions by providing access to public assets (including our transport infrastructure, organisational expertise, match funding and publicly owned data).

Using our transport system to enhance and protect our environment

We will use transport assets for non-transport functions so as to protect and enhance our built and natural environment.

This will include, but not be limited to, the use of transport land and buildings for sustainable energy generation, enhancing biodiversity and providing green spaces, and sustainable drainage systems (SuDS).

Delivering a green revolution – policy showcases

Green bus shelters

Green bus shelters which can improve air quality, generate their own power and even attract bees are being trialled in Halesowen.

TfWM has worked with the Halesowen Business Improvement District (BID) and Halesowen in Bloom to bring some plant-topped bus shelters to improve the town centre environment.

The shelters are made from recycled materials and their roofs include plants designed to reduce carbon in the environment as well as filters to catch fine particles and improve air quality.

Wild flowers, which attract bees and other pollinators, will grow from the eaves and roof edges and appear during the Spring, turning the bus stops to buzz stops.

Further to this are solar panels which will not only generate power for the display screens, lights but also allow people to charge their mobile phones for free while waiting for the bus.

If the trial proves successful more of the environmentally friendly stops could be installed as TfWM replaces and renews its 5,000 bus shelters across the region – playing a part in helping the region achieve its #wm2041 net-zero carbon targets.



Coventry Electric Bus City

Coventry City Council, Warwickshire County Council, Transport for West Midlands (TfWM) and bus operators are working together to make the bus fleet in Coventry all electric.

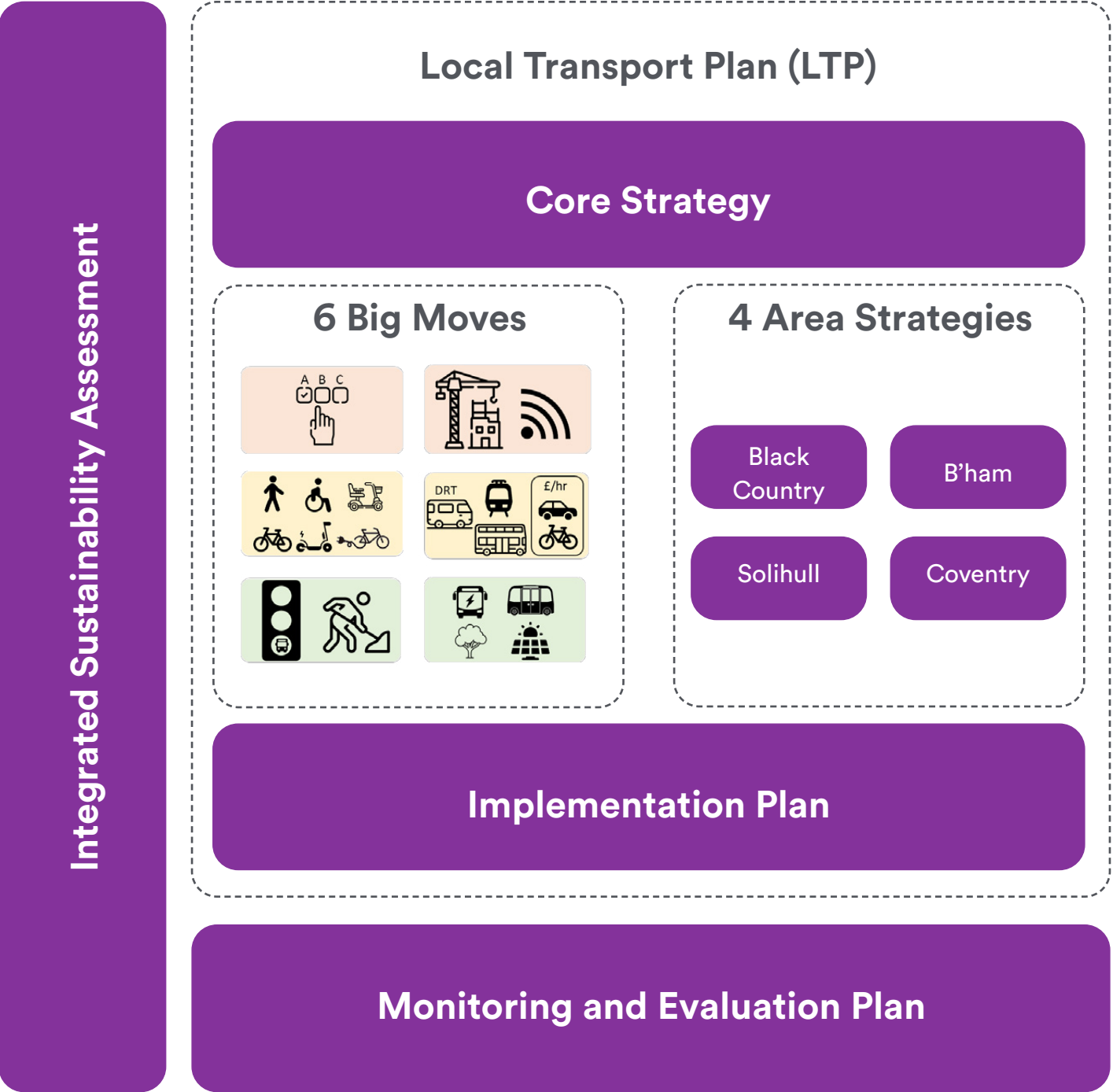
This will be the UK's first All Electric Bus City and under the ground-breaking project, every bus in Coventry will be electric powered by 2025, leading to improved air quality, reduced greenhouse gas emissions and lower running costs.

A £50m grant from the Department for Transport (DfT) will fund 297 all-electric buses and is supported by a further £78m of investment from local bus operator into depot charging facilities and associated power upgrades.



Implementation

LTP Development



The West Midlands LTP will include a number of component documents.

This **Core Strategy** primarily sets out the overarching aims, vision, approach, and framework for action for transport in the region until the end of 2041.

More detailed policies and implementation proposals will be identified aligned to the core strategy. These will be set out in 6 strategies relating to our **6 Big Moves** – focussed on regionwide principles and proposals for each Big Move – and **4 Area Strategies** – focussed on the planning of measures across our neighbourhoods, centres and corridors. The Big Moves and Area Strategies will be developed in tandem. The Area Strategies will be particularly important for resolving how measures across the 6 Big Moves will be delivered alongside each other in particular places, and for accounting for the land use and development proposals within Local Development Plans.

There are always more proposals than resources allow for. The **Implementation Plan** will set out our priorities for measures, how funding sources will be used to deliver these, and timescales for development and delivery. The implementation plan will also set out plans for further policy and scheme development where concepts require further development.

A **Monitoring and Evaluation Plan** and **Integrated Sustainability Assessment** will continue to be iteratively developed to support the LTP and updated throughout the life of the plan. They will transparently ensure that LTP development and delivery is meeting the LTP objectives and broader duties relating to equalities and sustainability.

Excepting the Core Strategy, the LTP will be a living document and will be updated and amended with new policies and implementation proposals periodically.

Updates to the LTP will be agreed through discussions with the WMCA's Strategic Transport Board, comprised of transport portfolio holders of the seven metropolitan borough authorities. Where these are deemed to be significant, approval will be sought from WMCA Board. Where the decision to amend the strategy is considered to have a significant impact on a local community, local stakeholders will have an opportunity to comment through a targeted local consultation process.

Major reviews of the LTP will be undertaken periodically and linked to changes in local and national transport policy.

The WMCA's Strategic Transport Board will be responsible for overseeing delivery of the LTP on behalf of WMCA. At officer level, delivery will be overseen by Strategic Transport Officers Group (STOG), comprising managers from the seven metropolitan borough authorities with responsibilities for transport and TfWM's Executive Director.

Sustainability throughout plan implementation

Implementing the LTP policies will require a balance between maintenance and operation of the existing transport network alongside construction or enhancement of infrastructure. These developments have the potential to impact the environment and local communities and visitors to the affected area. We will ensure that throughout our design and implementation process we understand and take account of the potential impacts and, wherever possible, specify designs to avoid or mitigate them, or enhance them where appropriate.

Where intervention takes place, measures will be subject to the appropriate level of assessment by the relevant authority, adhere to the relevant legal framework and be reflective of the scale and nature of the project. This will ensure that we understand potential impacts and how these can be best avoided or mitigated, or enhanced where beneficial.

Dependent on the scheme, assessment will include Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment. Where these statutory assessments are undertaken they will be guided by HM Treasury’s Green Book and DfT Transport Appraisal Guidance.

We will work closely with partner organisations, including the local authorities to ensure that consideration of sustainability, including health and equality, is made at the earliest possible planning stage for schemes. We will identify the types of assessment that are appropriate for the scale and nature of the scheme at each stage of development and which organisation has responsibility for the assessment process.

This will allow for full consideration of requirements in Local Plans and required statutory processes as necessary.

In developing this LTP, we will have a presumption in

favour of working with partners to make net improvements to the local environment wherever possible and, as a minimum, will always follow the policies set out in this LTP to take every opportunity to protect and enhance the environment. These principles have been integrated within our 6 Big Moves.

For any measures that could potentially affect sites that are designated for nature conservation or for other reasons, such as geodiversity, we will appropriately assess any potential direct or indirect impact that may arise over the life span of LTP. We will mitigate and / or compensate for any impacts, in line with existing best practice and relevant legislation. This will include undertaking a Habitats Regulation Assessment (or equivalent) when necessary.

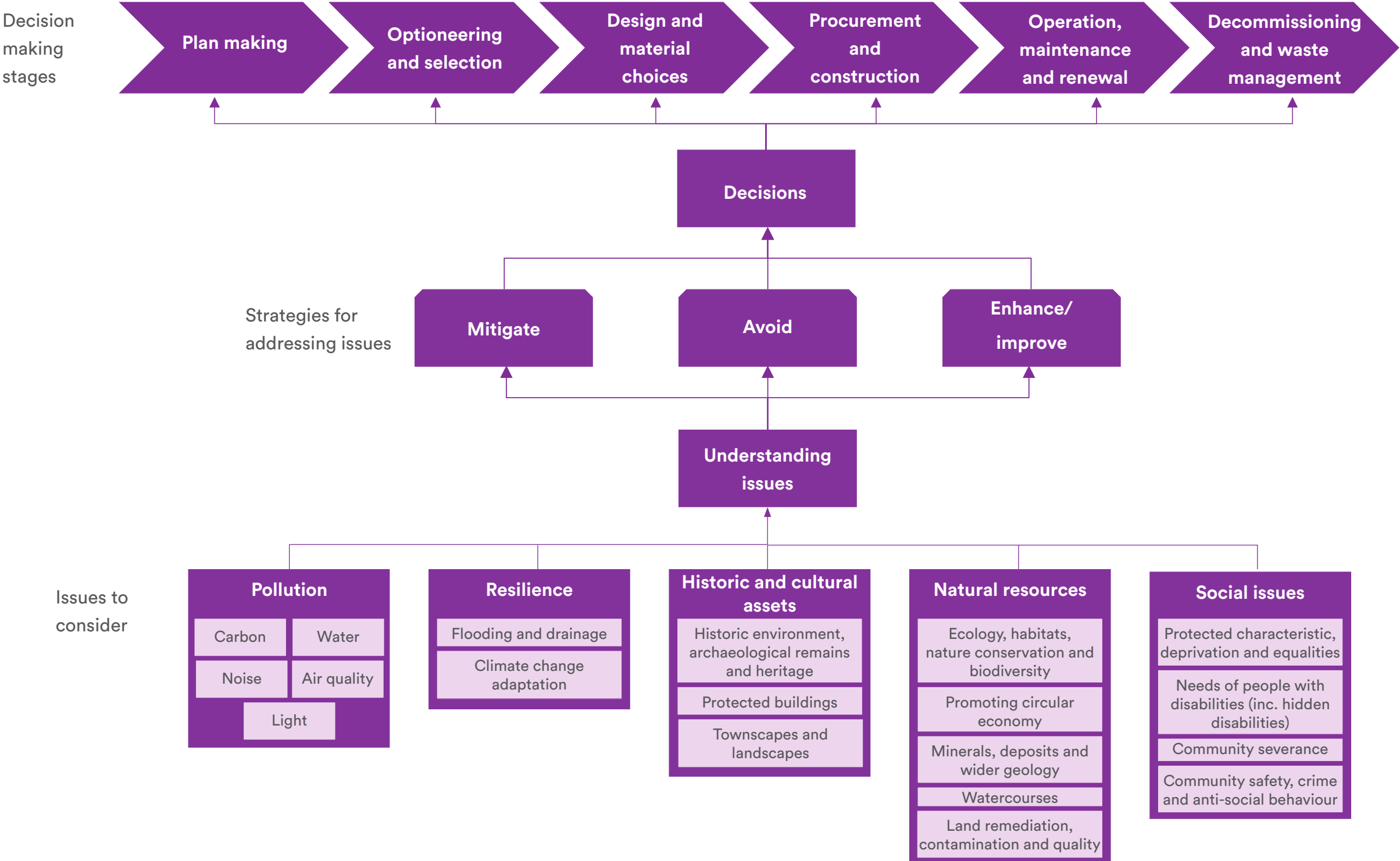
Environmental Management Plans (EMPs) will be prepared and implemented for all construction, refurbishment and maintenance contracts and will include the findings and suggested mitigation from any assessment made. The EMPs will consider material resource use, energy use, and other environmental issues relevant to the scheme, and will explain how risks and impacts will be mitigated, managed and addressed.



Embedding sustainability in decisions at all stages

Decisions throughout the development and operation of our transport system affect environmental, social and economic assets that must be protected and improved. This includes any “embedded” impacts such as carbon emissions associated with materials used for construction.

We will work closely with statutory and wider stakeholders to understand issues relating to key assets for sustainability and develop strategies to enhance and protect these through options to be considered and decisions to be made at all stages of LTP development and implementation (including scheme development and asset operation).



Working together

Whilst WMCA does have statutory responsibility to set the LTP for the area, it does not have direct responsibility for managing and operating most aspects of the transport system. Meeting our aims through delivering action will involve many partners.

WMCA, TfWM and the seven metropolitan borough authorities will continue to work together with local partners such as transport operators, with our neighbouring local authority partners, with our regional partners such as West Midlands Rail Executive and Midlands Connect, and with national partners such as Government and the national agencies responsible for transport functions to develop and deliver the LTP.

Ensuring that our transport system can support the wider objectives for growth, sustainability and quality of life in the region will mean working closely with those with responsibility for wider public outcomes, locally and beyond.

The successful delivery of the LTP will require other partners to deliver the policies and implementation proposals within it, reflecting them in their own plans.

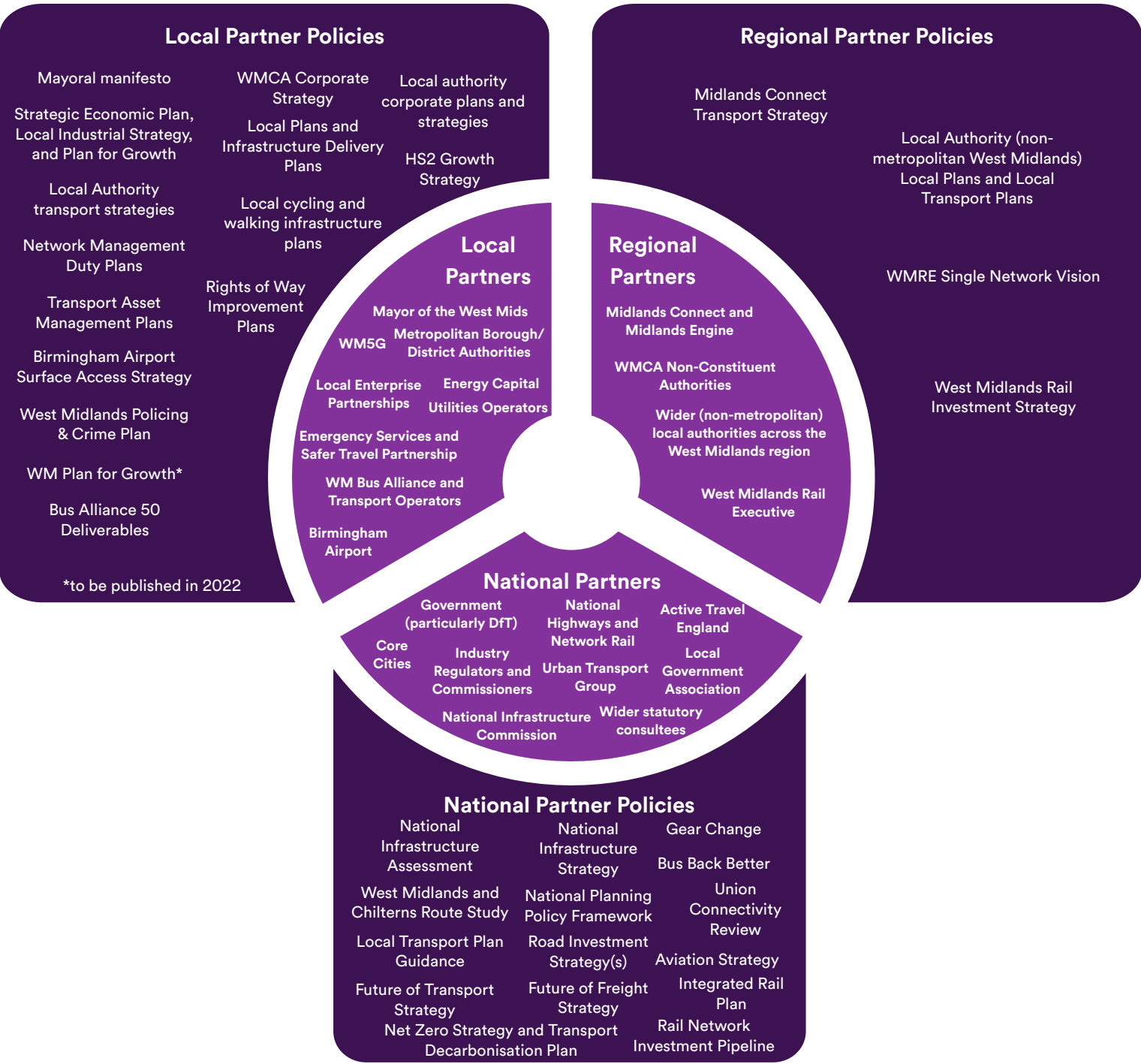
There are a number of delivery partners who are critical for delivering this LTP:

- The seven metropolitan borough authorities as highway, traffic and planning authorities.
- Local public transport operators who are responsible for running the buses, trams and trains our citizens use every day as well as emerging operators of shared mobility services (e.g. car clubs, and bike and e-scooter hire).
- National Highways, Network Rail and HS2 who are responsible for managing and developing the strategic road network and railways in the West Midlands.

Devolution and reform of responsibilities will enhance our voluntary partnerships, helping us to make best use of partners resources and ensuring we have the powers we need locally to achieve the best possible outcomes for the public.

Key Partners and Policies

This diagram highlights some of our key local, regional and national partners and the policies and plans that have influenced this LTP. In turn, we will continue to work with these partners to influence policy implementation and future policy development to take into account our approach to transport in the West Midlands.



Prioritising and resourcing our efforts

TfWM and partners must use their resources across three broad areas of spend to ensure our transport system is working effectively:

- Maintenance and renewal – maintaining assets to keep them performing and replacing them when they’re at their end of life;
- Network enhancements – schemes to make our transport system better;
- Service and concession delivery – the day to day spending required to keep services and concessions going.

There are many sources of funding available to and used by WMCA to fund these activities:

- Transport Levy
- Maintenance block
- Capital grants
- Prudential borrowing
- Transport user fares, charges and fees
- Non-fare revenue sources (e.g. advertising, property)

We don’t have complete discretion to use these funding sources for any activity – e.g. grants often come with conditions requiring the funding of particular projects and much of the transport levy has to be spent on the statutory English National

Concessionary Travel Scheme (providing free bus passes for older and disabled people who qualify).

The Implementation Plan will set out a funding strategy for securing the resources required to deliver our implementation proposals.

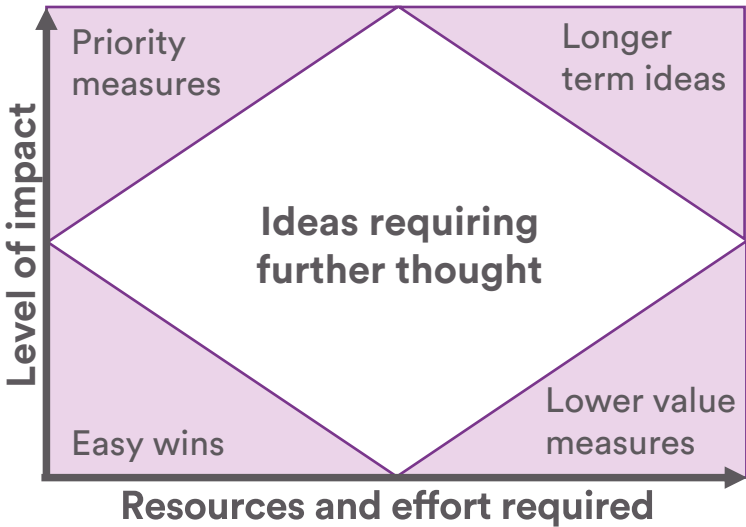
Local transport relies heavily on funding from central Government. We will continue to make the case for investment in our region, and we will continue to push for better long-term security of funding and flexibility in how to invest it best in our region. TfWM and local authorities will continue to explore options to create locally raised revenues from the planning and transport system to be used to develop and improve the local transport network.

Ambitious programmes of investment will also require continued close working with our delivery partners to secure the skills and knowledge required.

At the start of this LTP period, the UK will be emerging from the COVID-19 pandemic. It is likely that in the years to follow, public funding will be under pressure. We will need to think carefully how to best use funds available to enhance our network to greatest effect. However, we will make a strong case for increased revenue funding to support maintenance and renewal (which has already suffered a period of significant underinvestment owing to austerity policies) and public transport service delivery (noting that the pandemic will suppress demand for public transport for a number of years and services will be lost if any shortfall in fares is not made up in subsidy).

A balanced and impactful programme

There are lots of ideas for actions we can take to make our transport system better. But we need to make sure we have a balanced programme: this means that we need to make sure that we don’t use all our resources on a few expensive big projects; we need a programme that delivers benefits today and helps support immediate, scalable behaviour change as well as focussing on building towards bigger change over the long term; and ultimately what we do must represent value for money for citizens.



Where there is flexibility over how resources can be used, resourcing of transport locally will be prioritised based on the following principles:

- We will prioritise critical functions to ensure services for our most vulnerable service users are protected and to ensure our core assets continue to function;
- We will maintain a balanced programme of measures delivering actions across the 6 Big Moves to ensure impacts are felt across our Motives for Change;
- We will seek to ensure as many benefit from our actions as possible by ensuring delivery is felt across our region;
- We will seek to make investments that provide good value for money;
- We will have a balanced programme of short and long-term activity; of measures that can be delivered quickly for immediate impacts, and investments that will take longer to develop and deliver; and
- We will minimise redundant work, seeking to “dig once” where possible and otherwise ensuring schemes include future planning to minimise disruption and costs when further schemes are progressed (for example where bus priority schemes may be upgraded to Sprint and/or West Midlands Metro in future).
- We will coordinate schemes either to avoid excessive disruption to our networks or to capitalise on opportunities to reduce costs where multiple schemes can be delivered simultaneously nearby (without excessive disruption)



Transport for
West Midlands

Reimagining transport in the West Midlands: Local Transport Plan Core Strategy - Summary



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Introduction

‘Reimagining Transport in the West Midlands’ is the fifth Local Transport Plan for the West Midlands’ seven metropolitan districts/boroughs.

This is the summary of the draft Core Strategy of the Local Transport Plan - the overarching document that sets out our aims, vision, approach, and a framework for action.

After the publication of our Green Paper for ‘Reimagining Transport in the West Midlands’ we asked for the views of stakeholders through a *conversation about change*. The engagement used a variety of channels including surveys, market research and online and in-person workshops.

Those we spoke to when we engaged on the Green Paper agreed that we need an emission free transport system that’s fairer, safer and healthier. It also needs to be a transport network that gets people to places without clogging up our streets or causing climate change and making pollution worse.

The issues raised around our 5 Motives for Change resonated with those who responded. Climate change and addressing inequality were the areas of most concern.

There was a clear sense from responses that the current approach to transport was not delivering sufficient improvements, or that things were getting worse.

The new draft plan shows how the transport system will be developed and managed in the region and we’ve already started talking to people and businesses about it and about how it can meet our future needs.

There are difficult decisions to be made; people know we can’t build our way out of all our problems or rely on new technology, like electric cars, to solve them.

Whilst the car is still going to be important in future, the majority agreed that **car use needed to reduce.**

The shift to electric vehicles was supported but there was concern that **electric vehicles wouldn’t solve the wider issues**

92% of respondents were concerned by **climate change**

2/3 of people felt that levels of **traffic on local roads** were now a problem.

People felt that we can’t build our way out of all of our problems – we need to focus on **using existing infrastructure better**

83% agreed that a key policy aim should be to tackle **inequalities in transport access**

The majority thought increasing **active travel** is important, but that **dangerous and busy roads** were holding people back.

68% of polled respondents to our green paper consultation said **‘sticks’ are needed** to achieve significant change in travel behaviour.

Feedback from engagement on our Green Paper



Our aims

Whatever happens it's clear that there needs to be a change in our travel habits and behaviours.

To address the big social, economic and environmental issues we face, the objectives in the new plan are framed around 5 'Motives for Change' where we think that changing transport could help us better support inclusive growth by providing a transport system that's fair to everyone and the environment.



There are three key changes needed in our transport system to make this happen - we need to improve accessibility, reduce traffic and electrify transport. That means using our cars less and accessing what we need in a different way.



Meeting commitments to decarbonise

Tackling the climate emergency is just one of our Motives for Change. It is unique because it requires a definitive pace and scale of change.

There are national legal targets to reach “net-zero” carbon emissions by 2050, and local ambitions within our WM2041 agenda to reach net-zero by 2041. But whilst those end dates are important, national targets and local ambitions also require us to hit carbon reduction milestones along the way.

Shifting to zero emission vehicles (ZEVs) like electric and hydrogen powered vehicles is important but not enough to meet these decarbonisation goals. We also need to reduce the amount we are using our vehicles.

By 2031, we would need to deliver the following scale of change to meet national obligations or to go above and beyond to deliver local ambitions.

National targets (net-zero by 2050)	Local ambition (net-zero by 2041)
10% reduction in car mileage	35% reduction in car mileage
Accelerate ZEV uptake by 1 year	Accelerate ZEV uptake by 5 years

The vision

Although private vehicles will still be important in the future, we want the West Midlands to be a place where people can thrive without having to drive or own a car.

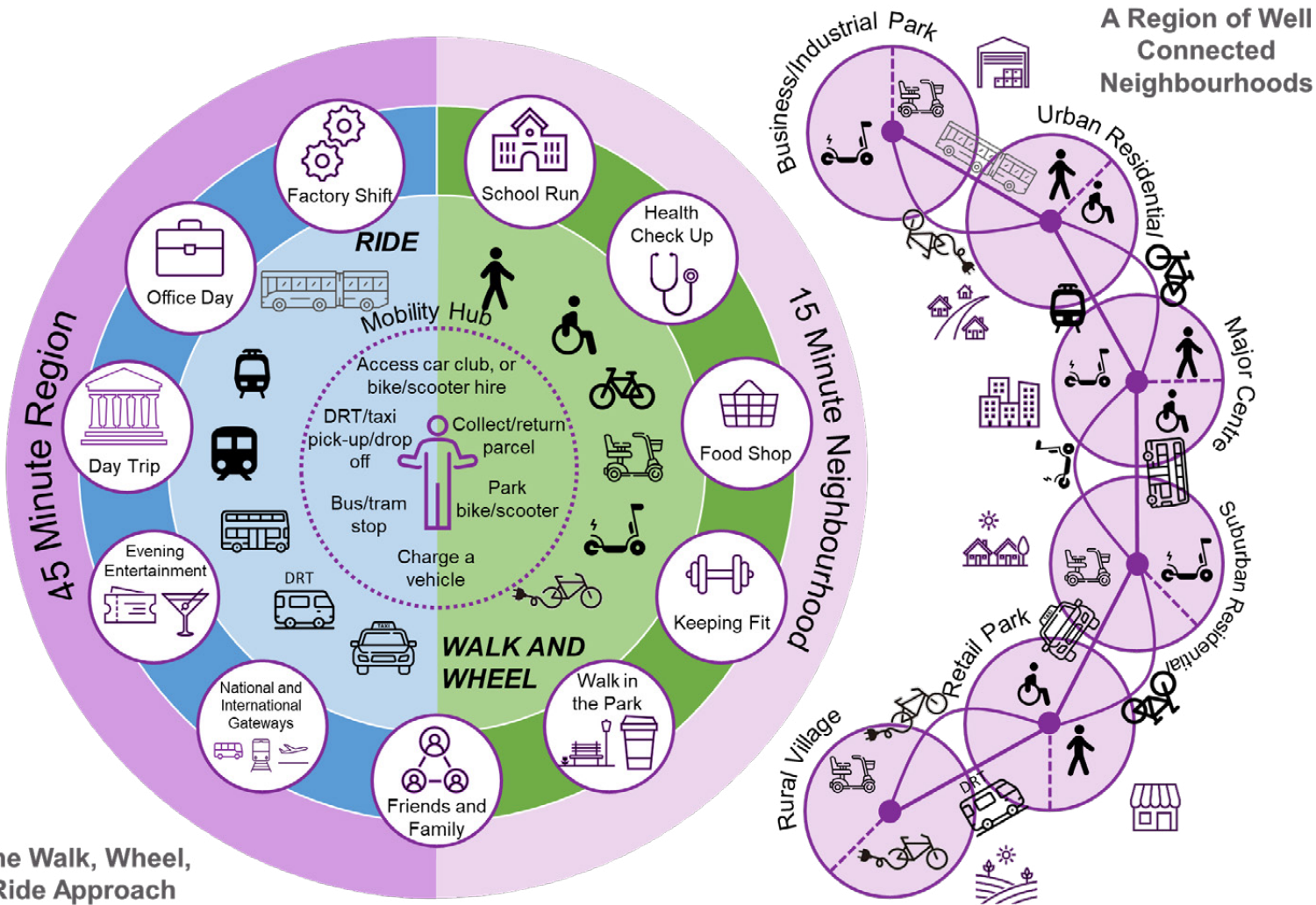
We have developed a vision for a well-connected 45 minute region and 15 minute neighbourhoods, where people can travel to access what they need through a mix of walk and wheel, and ride modes.

It means that a good range of services in our neighbourhoods can be accessed by “walking or wheeling” in a round trip of no more than 15 minutes, and a good range of places across our region to undertake work, leisure and socialising can be accessed by “ride” modes within a 45 minute trip.

This system will be supported by shared mobility services. These are services like car and van clubs so you don’t have to own an expensive vehicle, or bike and scooter hire schemes to use in places where perhaps you couldn’t bring your own bike or scooter – for example when you’ve caught the bus or train into your town/city centre and need a quicker way to get around once there.

All of this will be connected by mobility hubs. These are places where you can conveniently access a range of transport services. So as well as catching a bus, you might be able to access car and van clubs, hire an e-scooter, charge your electric vehicle or perhaps make use of a parcel drop off and pick up point.

This vision is not meant to be prescriptive. We recognise that everyone travels for different reasons, to different places and using different modes, and places themselves are different. So what works in one neighbourhood might not work in another. But it does give us something to aim for where everyone will have good options and choices to access what they need.



The Walk, Wheel, Ride Approach

15 Minute Neighbourhoods

a good range of services in our neighbourhoods can be accessed by “walking or wheeling” in a round trip of no more than 15 minutes

45 Minute Region

a good range of places across our region to undertake work, leisure and socialising can be accessed by “ride” modes within a 45 minute trip.

Ride modes

- Sprint (bus rapid transit)
- Light rail, inc. very light rail and trams
- Local heavy rail services
- Conventional bus services
- Demand responsive bus services – mini-buses that can be hailed on-demand.(inc. Ring & Ride)
- Taxis and private hire vehicle (inc. ride hailing)

Walk and wheel modes

- Walking
- Using a wheelchair
- Conventional pedal cycle
- Mobility scooter
- Micromobility - fully electric or electrically assisted light vehicles such as e-scooters and e-bikes (noting that these are not currently generally permitted on public highways)

Our actions

To help deliver the changes needed we will focus on action across 6 ‘Big Moves’.

These Big Moves are a framework for the actions we will take to improve accessibility and encourage **avoid**, **shift** and **improve** behavioural changes.

Avoid

Avoiding travel - for example by accessing services online and consolidating trips we make;

Shift

Shifting travel - to places that are more accessible by sustainable modes of transport, such as cycling, walking or public transport and travelling by those modes; and

Improve

Improve travel - by designing out emissions and other impacts from the vehicles we use and tailoring their use, for example by adopting zero emission vehicles (such as electric/hydrogen vehicles).

For our new Local Transport Plan to be effective in reducing car use and improving access by other modes of travel it must include actions to:

- **Invest in better provision** for alternatives to our cars; and
- **Manage demand** by discouraging the behaviours we want to do less of, such as using our cars.

An overview of each of the Big Moves is presented on the following pages. The LTP will include six detailed strategies for the 6 Big Moves setting out challenges, opportunities and principles to consider across the region. Four Area Strategies will then set out how actions across the Big Moves are applied in specific places as appropriate to local views and context.

AVOID



Behaviour change for the better

- Better information to make better travel choices
- Building consensus and appetite for action on our streets
- Managing the transport network to promote behaviour change



Growth that helps everyone

- Promoting accessible new development
- Designing and getting transport right for new developments
- Making the most of digital connectivity

SHIFT



Safer streets to walk and wheel

- Equipping people with skills and confidence
- Quiet and safe local streets
- A Starley Network with segregated routes for wheeling



Public transport that connects people and places

- Better public transport services
- More options for shared mobility
- A better connected and integrated network

IMPROVE



A resilient transport network

- Keeping the West Midlands moving
- A well-maintained network
- Using our network better for efficient and safer travel



Delivering a green revolution

- Assisting the switch to zero emission vehicles
- Working with businesses to innovate and export future mobility solutions
- Using our transport system to enhance and protect our environment

Behaviour change for the better

Many measures being set out in this strategy are designed to improve sustainable travel options to support behaviour change. But these in isolation won't be enough to achieve impacts at the scale or at the pace that is needed! To deliver behaviour change, the travel choices that we will need to move away from - like driving - would need to become less appealing. We are all part of the problem and we can all play our part in the solution by choosing to travel differently. However, we will need to look carefully at the measures which drive behaviour change and build consensus on the need for “sticks” as well as “carrots”.

Avoid



Information

- Critical in helping people make the right decisions.
- Even better promotion of public transport
- Visible brands across our different modes, including the SWIFT smart card.

Demand Management

- Reallocating road space and higher parking charges at key destinations and workplaces.
- Charges can also be used to encourage cleaner vehicles.
- Engagement is an essential part of the design and delivery



Growth that helps everyone

Good, sustainable access to opportunities is critical to help us deliver inclusive growth and to be successful. But to do this we need to be building the right things in the right places. New developments must be planned in line with the objectives of this LTP. We must minimise transport's harmful impacts and maximise the attractiveness and success of sustainable modes.

Avoid



Sustainable and accessible development

- Continue to support a brown field first policy
- Innovative and sustainable travel in all developments.
- Minimise the impacts of single occupancy car usage

Digital connectivity

- Improve access to high speed broadband and 5G connectivity to all
- Reduces digital poverty and create a series of connected communities.



Safer Streets to walk and wheel

We want more trips to be made by walking and wheeling. These ‘active’ modes provide significant benefits to people and their local streets and communities. They're also very sustainable and affordable. They can also have a positive impact on people's physical health and mental wellbeing and provide a good alternative to the car.

Shift



Low Traffic Neighbourhoods (LTN's)

- Limit traffic in a street or collection of streets
- Safer, easier and more appealing for cycling and walking.
- LTN's have resulted in a number of benefits.

Micromobility

- A broad range of transport options that can be used for short distances
- E-scooters are also being trialed in the West Midlands.
- Starley Network for cycling and walking



Public transport that connects people and places

Safe, convenient, affordable and accessible public transport is essential. This includes bus services and Ring and Ride across our area which are already vital for those who can't drive, as well as our expanding West Midlands Metro, Sprint and rail networks. Shared mobility services (like bike hire and car clubs) could also play a greater role in future. One in four West Midlands households don't have access to a car. Within a more inclusive transport system, public transport will need to play an even greater role.

Shift



Public transport

- Invest and improve the infrastructure to enable operators to provide better services
- Greater priority on highways for buses
- Improvements to rail capacity, along with new stations

Shared mobility

- Allows people to move around without the need to own a car
- Services include car clubs and e-scooters and infrastructure to support their operation
- Mobility hubs in key locations where consumer demand can sustain them



A resilient transport network

Roads are important because they are used for most trips, whatever the mode. They play a different role in the lives of people and businesses. We need to make our streets work for everyone by developing the network so that balances the competing needs for space and supports the travel behaviours, which will help to deliver our outcomes.

Improve



Regional Transport Coordination Centre (RTCC)

- Oversees all transport modes in partnership with operator and local authorities.
- Helps to coordinate the delivery of the transport investment programme and minimise impact through collaboration with our partners.

Highway maintenance

- Work with local authority partners on a focused plan
- Prevent the deterioration of streets and structures
- This is essential in the improvement of all modes of transport, including emerging mobility solutions



Delivering a green revolution

Places need to be cleaner and greener. Private and public vehicles need to be zero emission, helping to improve local air quality and reduce noise. In addition, providing green infrastructure will help habitats and biodiversity. This encourages people to spend more time outside improving physical health and mental wellbeing benefits.

Improve



Electric Bus City

- Coventry to become the UK's first electric bus city
- Every bus will be electrical powered by 2025
- Improved air quality, reduced greenhouse gas emissions and lower running cost.

Green bus shelters

- Improves air quality and generates power. Being trialled in Halesowen.
- Transport for West Midlands worked with the Halesowen BID
- Roof top plants improve the town centre environment and attracts bees.



Integrated Sustainability Assessment



We will develop these strategies in partnership with local authorities, ensuring that the identification of the measures needed will be problem-led rather than solution-led to help us create a more prosperous and better-connected West Midlands which is fairer, greener and healthier.

As we develop detailed plans in different places we will need to think about how the decisions over how we govern transport locally will affect the future of transport in different places. It's important to think about what places will look like if we carry-on as we are or what they might look like if they change course. What kind of future do you want for you and your family?





Clean Air Zone

Six Month Report

Publication Date 03 March 2022

WCAG

Birmingham City Council launched a Category D Clean Air Zone on the 1st June 2021. This report covers the first six months of operation (June 2021 to December 2021).

The changes to travel behaviours brought about by Covid has reduced the volume of road traffic across the whole of Birmingham's road network, including the city centre. Therefore, it has been difficult to make a direct correlation between the introduction of the Clean Air Zone and any expected or modelled reductions in traffic volumes. For that reason, this interim report on the Clean Air Zone focuses on changes in the rates of compliance within the vehicle fleet and overall trends in air quality. Key findings include:

- **Early indications are that there has been a reduction in the levels of Nitrogen Dioxide within the Clean Air Zone (when comparing 2019 (pre Covid) to 2021 results) by an average of 13%. NB – this is based on part year data.**
- **Based upon Unique Vehicle Traffic Data around 98% of the vehicles that pass through the zone daily are passenger cars (88%) or vans (LGVs) (10%).**
- **From the launch of the Clean Air Zone the average rate of compliance for all vehicle categories has improved from 79.8% in June to 88.8% in December 2021.**
- **Compliance for passenger vehicles has improved from 81.8% in June to 89.9% in December 2021.** The total compliant and non-compliant unique passenger vehicles is around 90,000 on a weekday and around 70,000 per day on the weekend.
- **Compliance for Light Goods Vehicles (LGV) has improved from 63.3% in June to 77.4% in December 2021.** The total compliant and non-compliant unique LGVs is around 11,000 on a weekday and around 3,000 per day on the weekend.
- **Compliance for Heavy Goods Vehicles (HGV) has improved from 90.6% in June to 94.8% in December 2021.** The total compliant and non-compliant unique HGVs is around 1,400 on a weekday and around 250 per day on the weekend.
- **Bus and Coach compliance rates are consistently high at 98.8%.** The total compliant and non-compliant unique bus and coach is around 600 on a weekday and around 400 per day on the weekend.

1.0 – SUMMARY

There has been a reduction in the levels of NO₂ within the Clean Air Zone (on average 13%) when comparing the baseline year (2019) to the first six months of operation for the Clean Air Zone (i.e. June 2021 – December 2021). However, due to the relatively short duration that the Clean Air Zone has been in operation and the ongoing impacts of the restrictions put in place in response to Covid, it has been difficult to entirely disaggregate the impact of either factor on improvements in air quality.

Overall since the launch of the Clean Air Zone in June 2021 there has been a steady improvement in compliance rates in all vehicle categories that are subject to the charge.

Displacement of traffic from the launch of the zone from the city centre to the ring road does not appear to have occurred. The Clean Air Zone does not appear to have caused an unintentional reduction in compliant vehicles, meaning that compliant vehicles have not been dissuaded from the Clean Air Zone. Instead the zone has been successful in discouraging non-compliant vehicles from entering the zone.

Reporting on changes to the rates of compliance within the vehicle fleet will continue to take place on a monthly basis. Any changes to compliance act as 'lead indicators' to changes in the levels of NO₂. However, additional air quality data will need to be captured and assessed over the next six months in order to be able to provide a robust assessment of the impact of the Clean Air Zone.

2.0 – BACKGROUND

What is a clean air zone?

A Clean Air Zone is an area where targeted action is taken to improve air quality, by discouraging the most polluting vehicles from entering the zone.

The Government has stipulated by a Ministerial Direction that Birmingham must improve the level of nitrogen dioxide (NO₂) in the shortest possible time. As road traffic is the greatest source of NO₂ a Clean Air Zone has been introduced to reduce the level of NO₂ to the legal standard of 40µg/m³ annual average in the shortest possible time. The area (as shown in Figure 1) to be encompassed by the scheme has been determined through an extensive technical exercise and public consultation.

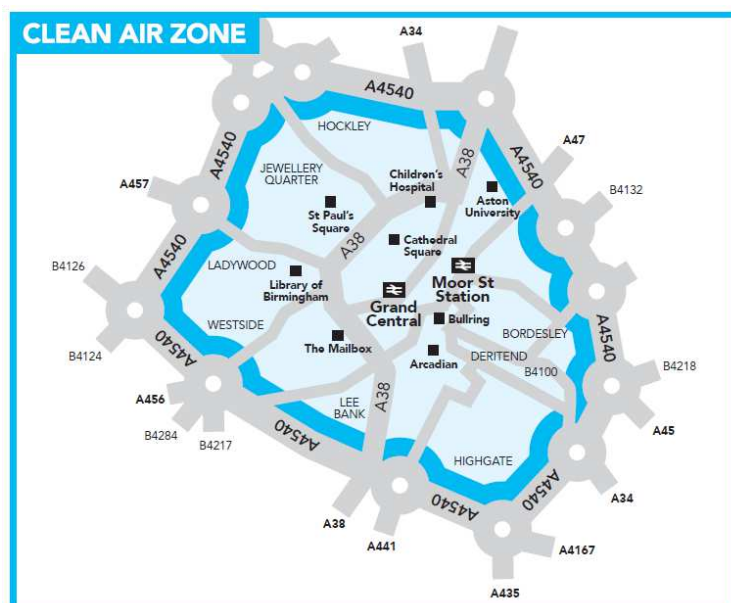


Figure 1 Map of the Birmingham Class D Clean Air Zone

Birmingham's Clean Air Zone launched on 1st June 2021 and operates in the central Birmingham area within the A4540 Middleway, but not on the ring road itself. It should be noted that while the Clean Air Zone became operational on the 1st June the application of the daily fee was paused for the first two weeks of the scheme and came into effect on 14th June 2021. The Clean Air Zone operates 24-hours a day, 365 days of the year. Vehicles that do not meet the emissions standards below are subject to a daily fee:

- Euro 4 or better for petrol cars and vans
- Euro 6 or better for diesel cars and vans
- Euro VI or better for lorries, buses and coaches

The fee that applies to the different vehicle types is:

- Cars and light goods vehicles (vans) - £8 per day
- Coaches and HGVs - £50 per day

Further information on the Clean Air Zone can be found on the [Brum Breathes website](#)

The Full Business Case for the Clean Air Zone can be found on the [Birmingham City Council website](#).

The air quality and traffic modelling reports for the Clean Air Zone can be found on the [Birmingham City Council website](#).

The impact of the Clean Air Zone will be assessed using a range of different metrics including:

- Air quality monitoring data (Nitrogen Dioxide)
- Number of vehicles and compliance rates
- Traffic flow data

Definitions:

Vehicle compliance - refers to the number of vehicles that comply with the emission standards of the Clean Air Zone as described above.

Non-compliant vehicles - are vehicles that do not meet the emission standards as described above. However, there are a number of exemptions currently in place to lessen the financial burden on owners / operators.

Unique Vehicles – every vehicle that enters the zone is identified by a network of cameras. Once a vehicle has been identified it is classed a unique vehicle irrespective of whether it is compliant or not. Once identified the vehicle can travel in and out of the zone for that particular day (midnight to midnight). Much of the data reported in here relies upon unique vehicle data rather than the volume of journeys.

Covid19

The Clean Air Zone was launched following the third national 'lockdown' in early 2021. Data leading up to the launch of the scheme was heavily influenced by local and national lockdowns. When the zone launched in June 2021 no restrictions were in place. However, on the 8th December 2021 the Government implemented its 'plan B', as part of its response to the spread of the Omicron variant. The implementation of 'plan B' included encouraging people to work from home once again but no business was required to close. At the time of writing these restrictions have now been relaxed.

3.0 – HOW HAS AIR QUALITY CHANGED?

The purpose of the Clean Air Zone is to reduce the levels of the air pollutant NO₂, which is predominantly generated by road traffic, by reducing the number of the most polluting vehicles from entering the zone. This will bring Birmingham closer to compliance with the legal limits in the shortest possible time.

Air pollution concentrations are affected by many different factors including the weather and regional contributions outside of Birmingham, as well as the impact of other highway improvement schemes. Therefore, the analysis of air quality monitoring data is an important factor and will need to be continued.

It should also be noted that there have been a number of additional highway schemes that have been progressed since the introduction of the Clean Air Zone and that these could have an influence on traffic flows and air quality. Further details can be found on [the Commonplace website for Birmingham City Council](#).

Air Quality Monitoring

Nitrogen Dioxide (NO₂) is monitored across the city using:

- **Diffusion tubes** are small plastic test tubes that are installed on structures such as lampposts. Birmingham City Council manages a network of over 100 diffusion tubes that are changed every month and provide a monthly average of NO₂. The monthly average is then averaged over the year to provide an annual average. Following this a correction factor known as a bias adjustment is then applied to the result in line with DEFRA guidance¹ to provide a final annual average.
- **Automatic analysers** (or Chemiluminescent analysers) provide hourly averages of NO₂ readings in real-time. Birmingham City Council manages a network of 15 analysers that have been strategically placed across the city.
- **Indicative Air Quality Sensors** bridge the gap between diffusion tubes and automatic analysers. These can be deployed on lampposts and provide real time results. However, they currently they do not meet the accreditation standard set out by DEFRA for NO₂, as such they cannot be relied upon for formal reporting purposes. As such they have not been included in this report.

¹ <https://laqm.defra.gov.uk/documents/LAQM-TG16-April-21-v1.pdf>
Version Final 1.2

All of the air quality data is available online via [the Birmingham Air Quality website](https://www.birminghamairquality.co.uk) which provides all of the diffusion tube data and live feeds from the automatic stations.

Birmingham Air Quality Diffusion Tubes

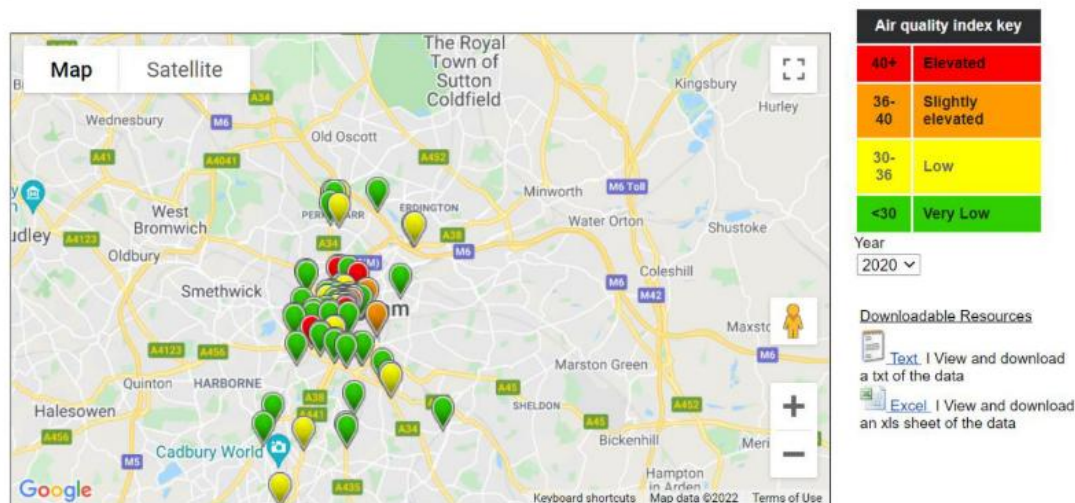


Figure 2 Birminghamairquality.co.uk website snapshot - Diffusion Tubes

Air Quality: Diffusion Tube Results

The Clean Air Zone launched in June 2021 resulting in data for the 2021 calendar year comprising 6 months' worth of Clean Air Zone operational data. The diffusion tube results for 2021 comprise 12 months of data to which a correction factor needs to be applied, this process being known as bias adjustment. The bias adjustment factor is normally provided in April of each year. Accordingly, the figures quoted in the table for 2021 are **provisional** based on a bias adjustment of 0.81 the same as 2020.

The following tables provide the annual average results for 2016, 2019, 2020 and 2021. Using 2016 as a baseline it is evident that there has been a marked improvement in all locations across the city. However, this is based on a relatively small number of monitoring sites. Therefore 2019 has been used as a more consistent baseline as there is less variation in monitoring locations.

It is clear from the tables that there was a marked and expected improvement in NO₂ in 2020 due to the Covid lockdowns and associated reduction in road traffic.

Comparing 2019 to 2021 shows a similar trend of improvement. However, if you compare 2020 to 2021 there appears to be a slight reduction in improvement, which indicates that, in the short term, Covid and the significant reductions in the volumes of road traffic, has had a significant impact on the levels of NO₂, compared with the introduction of the Clean Air Zone.

Tube ID (within the Clean Air Zone)	2016	2019	2020	2021 (provisional)	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
BHM63	41.0	28.4	25.0	24.6	-40%	-12%	-13%	-1%
BHM90	-	27.2	23.5	23.6	-	-14%	-13%	0%
BHM26	-	22.9	16.9	17.3	-	-26%	-24%	+2%
BHM62	49.0	33.4	26.4	26.2	-47%	-21%	-21%	-1%
BHM61	44.0	29.7	25.8	22.7	-48%	-13%	-24%	-12%
BHM92	-	40.2	31.4	34.1	-	-22%	-15%	+9%
BHM51	-	35.4	27.6	30.1	-	-22%	-15%	+9%
BHM35	-	28.3	24.2	25.2	-	-14%	-11%	+4%
BHM16	61.5	40.8	34.7	31.5	-49%	-15%	-23%	-9%
BHM39	54.0	36.8	31.1	32.4	-40%	-16%	-12%	+4%
BHM34	38.0	26.3	23.2	22.2	-42%	-12%	-16%	-5%
BHM36	54.0	31.9	28.6	27.9	-48%	-10%	-13%	-2%
BHM30	-	34.4	26.7	35.3	-	-22%	+3%	+32%
BHM59	-	37.2	30.0	32.8	-	-19%	-12%	+9%
BHM65	-	37.0	29.7	30.7	-	-20%	-17%	+3%
BHM24	-	37.8	33.0	35.3	-	-13%	-7%	+7%
BHM28	-	44.7	38.4	37.9	-	-14%	-15%	-1%
BHM88	-	58.1	50.6	48.4	-	-13%	-17%	-4%
BHM89	-	39.4	32.7	32.0	-	-17%	-19%	-2%
BHM58	-	36.6	28.8	33.2	-	-21%	-9%	+15%
BHM45 (2)	-	35.5	39.4	39.3	-	+11%	+11%	0%
BHM23	-	39.6	34.4	35.3	-	-13%	-11%	+3%
BHM46 (2)	-	50.0	49.7	48.1	-	-1%	-4%	-3%
BHM43	54.0	39.5	32.5	31.5	-42%	-18%	-20%	-3%
BHM44	55.0	39.0	30.3	31.3	-43%	-22%	-20%	+3%
BHM42	52.6	39.8	32.3	31.7	-40%	-19%	-20%	-2%
BHM53	64.0	50.0	44.3	49.7	-22%	-11%	-1%	+12%
BHM55	-	52.0	51.9	45.5	-	0%	-12%	-12%
BHM56	55.0	33.3	27.1	27.9	-49%	-19%	-16%	+3%
BHM08	55.7	34.8	22.2	23.7	-57%	-36%	-32%	+7%

Table 1 Nitrogen Dioxide Diffusion Tube Results 2016, 2019, 2020 and 2021 (Provisional using a bias adjustment figure of 0.81) for the Clean Air Zone with the Percentage change compared to 2016 and 2019 baseline where possible.

Tube ID (within the Clean Air Zone)	2016	2019	2020	2021 (provisional)	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
BHM41	66.3	50.4	41.8	49.1	-26%	-17%	-3%	+18%
BHM40	62.8	47.4	43.8	48.3	-23%	-7%	+2%	+10%
BHM86	-	33.7	28.7	32.0	-	-15%	-5%	+12%
BHM33	-	36.1	26.9	28.1	-	-25%	-22%	+4%
BHM87	-	59.6	46.5	46.9	-	-22%	-21%	+1%
BHM64	-	33.6	38.0	33.6	-	+13%	0%	-12%
BHM07	56.7	31.0	23.7	21.9	-61%	-24%	-29%	-7%
BHMCCL	-	-	-	53.2	-	-	-	-
BHMLWL	-	-	-	26.6	-	-	-	-
BHMLNS	-	-	-	29.7	-	-	-	-
BHMLSH	-	-	-	45.6	-	-	-	-
BHMLWL	-	-	-	26.6	-	-	-	-

Table 2 Continued Nitrogen Dioxide Diffusion Tube Results 2016, 2019, 2020 and 2021 (Provisional using a bias adjustment figure of 0.81) for the Clean Air Zone with the Percentage change compared to 2016 and 2019 baseline where possible.

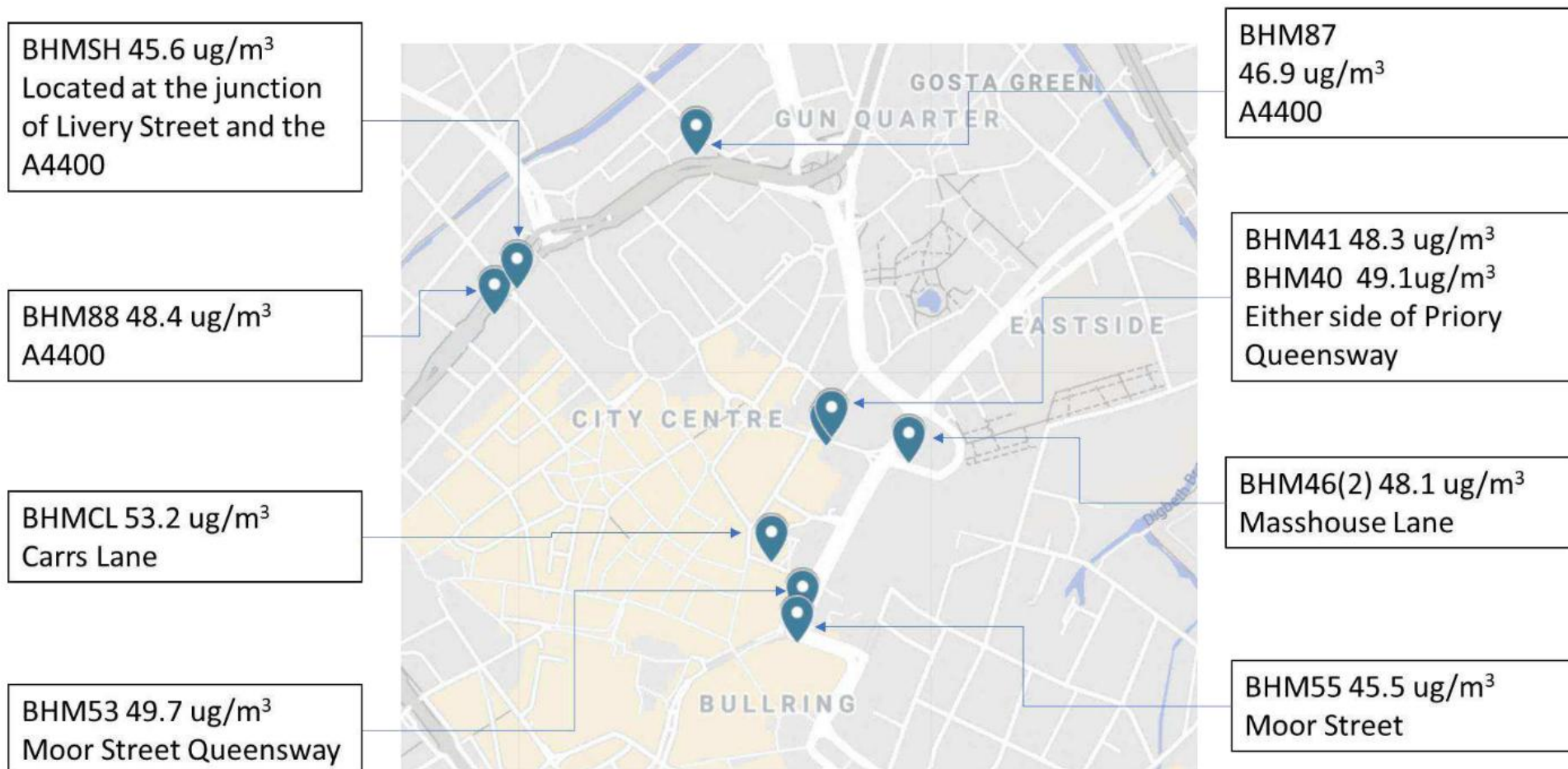


Figure 3 Provisional 2021 Diffusion tube exceedances within the Clean Air Zone (City Centre).

Tube ID (within the ring road)	2016	2019	2020	2021 (provisional)	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
BHM79	-	27.7	22.0	23.7	-	-20%	-14%	+8%
BHM80	-	35.5	29.6	28.9	-	-17%	-19%	-2%
BHM85	-	48.0	40.6	44.4	-	-15%	-8%	+9%
BHM82	-	28.6	35.1	31.7	-	+23%	+11%	-10%
BHM68	-	43.9	29.6	32.6	-	-33%	-26%	+10%
BHM69	-	37.6	27.5	29.6	-	-27%	-21%	+7%
BHM74	-	52.6	43.0	43.6	-	-18%	-17%	+1%
BHM21	-	48.5	37.5	38.4	-	-23%	-21%	+2%
BHM84	-	38.3	31.9	35.4	-	-17%	-8%	+11%
BHM78	-	31.7	25.3	27.5	-	-20%	-13%	+9%
BHM77	-	30.6	26.4	28.6	-	-14%	-7%	+8%
BHM75	-	34.0	29.2	31.0	-	-14%	-9%	+6%
BHM76	-	24.8	20.5	22.1	-	-17%	-11%	+8%
BHM72	-	22.8	17.5	18.6	-	-23%	-19%	+6%
BHM81	-	41.3	23.7	22.2	-	-43%	-46%	-6%
BHM67	-	31.8	24.9	27.2	-	-22%	-14%	+9%
BHM66	-	33.2	29.2	29.3	-	-12%	-12%	0%
BHM71	-	25.4	21.2	21.5	-	-16%	-15%	+1%
BHM27	-	34.7	30.7	30.9	-	-11%	-11%	+1%
BHM83	-	61.0	50.6	50.1	-	-17%	-18%	-1%
BHM25	-	38.0	36.0	36.5	-	-5%	-4%	+2%

Table 3 Nitrogen Dioxide Diffusion Tube Results 2016, 2019, 2020 and 2021 (Provisional using a bias adjustment figure of 0.81) for the ring road with the Percentage change compared to 2016 and 2019 baseline.

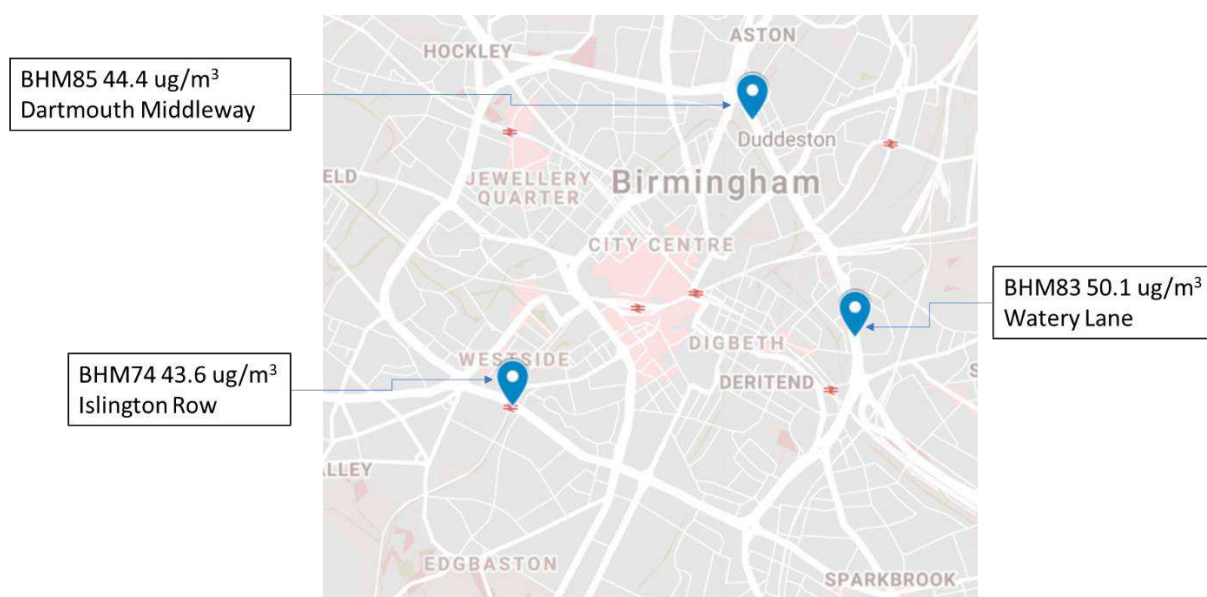


Figure 4 Provisional 2021 diffusion tube exceedances on the ring road

Tube ID (wider city)	2016	2019	2020	2021 (provisional)	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
BHM03	44.7	28.8	26.4	28.2	-37%	-8%	-2%	+7%
BHM09	46.3	32.3	28.6	28.0	-40%	-11%	-13%	-2%
BHM5(2)	-	34.0	29.3	30.2	-	-14%	-11%	+3%
BHM20	44.6	30.4	22.2	22.9	-49%	-27%	-25%	+3%
BHM4 (2)	-	32.8	27.8	26.9	-	-15%	-18%	-3%
BHM57	-	28.1	20.5	21.4	-	-27%	-24%	+4%
BHM37	-	26.3	20.4	22.9	-	-23%	-13%	+12%
BHM19	-	38.2	32.9	33.1	-	-14%	-13%	+1%
BHM99	-	40.0	32.1	34.8	-	-20%	-13%	+8%
BHM11	41.7	31.2	26.1	26.5	-36%	-16%	-15%	+1%
BHM12	42.9	31.5	26.0	26.6	-38%	-17%	-15%	+2%
BHM17 (2)	-	34.0	30.4	29.4	-	-10%	-13%	-3%
BHM18 (2)	-	35.3	31.3	31.3	-	-11%	-11%	0%
BHM01	18.8	15.1	12.7	14.2	-25%	-16%	-6%	+12%
BHM91	-	27.1	24.4	26.5	-	-10%	-3%	+8%
BHM02	20.2	14.4	12.0	12.4	-38%	-17%	-14%	+4%
BHM10	42.8	32.0	26.1	26.2	-39%	-19%	-18%	+1%

Table 4 Nitrogen Dioxide Diffusion Tube Results 2016, 2019, 2020 and 2021 (Provisional using a bias adjustment figure of 0.81) for the wider city with the Percentage change compared to 2016 and 2019 baseline.

Table 4 below presents the average percentage change in the levels of NO₂ in three areas of interest, the Clean Air Zone, the Ring Road and the Wider City where monitoring has been continuous. When using 2016 as a baseline compared to 2021 there has been a substantial

improvement in NO₂ of -42% however this is based on a smaller set of monitoring locations. By comparison 2019 to 2020 and 2019 to 2021 both indicate an improvement in all three areas. However, comparing 2020 to 2021 there is a slight degrading of NO₂ likely due to the effect of the various national Covid lockdowns.

	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
Clean Air Zone	-42%	-15%	-13%	+2%
Ring Road	No data	-17%	-14%	+4%
Wider City	-38%	-16%	-13%	+3%

Table 5 Comparison of Nitrogen Dioxide Average Percentage Change for the Clean Air Zone, Ring Road and wider city areas.

Where there has been an increase or decrease in NO₂ within the Clean Air Zone when comparing 2020 to 2021 it has generally been confined to the central core of the city centre as shown in Figures 3 and 4.

Air Quality Automatic Analysers

From the launch of the Clean Air Zone in June to December 2021 six automatic air quality units were operational within the zone or just outside. These include: Lower Severn Street, Moor Street, St Chads, Colmore Row, Ladywood and the A4540 just outside of the zone on the ring road. Data from the stations is available on the [Birmingham Air Quality website](#).

In November 2021 six additional stations have been installed within the zone and on the ring road. As these have only been operational for one month (December) they will not be reported here but will be included in future analysis. Data from these new stations is also available on the [Birmingham Air Quality website](#).

Table 5 provides the NO₂ annual averages of the stations within the zone and the ring road. In 2020 there were no recorded exceedances primarily due to the impact of Covid. In 2021 the year in which the zone went live one station at St Chads has recorded an exceedance.

Station	Environment	2019	2020	2021
St Chads	Kerbside	51	37.1	40.3
Colmore Row	Roadside	35	31.9	26.7
Ladywood	Urban Background	-	15	16.5
Lower Severn St	Roadside	43	23.7	26.2
Moor Street	Roadside	-	-	32.7
A4540	Roadside	32	29	31.5

Table 6 Nitrogen Dioxide annual averages from the automatic air quality stations within the Clean Air Zone and ring road.

A further analysis of 2021 data from St Chads has been undertaken to better understand the breakdown of when the pollution occurred both in terms of month and hour of the day. The daily hours are averaged across each month and used to present a 'heat map' showing in which months the pollution levels peaked and across which hours in those months. The data presented is as a percentage reduction from 2019 to 2021.

On average there appears to be a 20% improvement between 2019 and 2021. It is difficult to determine how much of this improvement is a result of the reductions in road traffic due to COVID, the introduction of the Clean Air Zone, or, more likely, a combination of both factors.

Elevated results appear to be confined to March which may be a result of a regional pollution event that may have elevated levels of NO₂ and may also reflect the easing of lockdown restrictions.

ate - Mont	January	February	March	April	May	June	July	August	September	October	November	December
00:00	-27%	-46%	-24%	-4%	-17%	-22%	0%	-35%	-15%	-34%	-35%	-19%
01:00	-31%	-47%	-20%	-4%	-16%	-22%	7%	-28%	-3%	-34%	-36%	-11%
02:00	-29%	-44%	-13%	-2%	-23%	-25%	-4%	-33%	-1%	-38%	-39%	-15%
03:00	-23%	-42%	3%	4%	-26%	-28%	-11%	-33%	-3%	-37%	-41%	-20%
04:00	-23%	-43%	13%	5%	-24%	-28%	-12%	-31%	-13%	-41%	-41%	-16%
05:00	-23%	-34%	18%	0%	-27%	-28%	-17%	-43%	-26%	-42%	-40%	-17%
06:00	-6%	-29%	20%	-5%	-26%	-28%	-23%	-46%	-24%	-37%	-42%	-19%
07:00	-9%	-28%	13%	-10%	-22%	-25%	-19%	-43%	-16%	-32%	-37%	-17%
08:00	-16%	-25%	12%	-7%	-15%	-24%	-13%	-43%	-12%	-27%	-33%	-18%
09:00	-24%	-32%	6%	-7%	-15%	-25%	-10%	-45%	-13%	-30%	-27%	-10%
10:00	-30%	-36%	-2%	-7%	-15%	-23%	-7%	-44%	-16%	-30%	-27%	-16%
11:00	-32%	-34%	0%	-12%	-17%	-19%	-4%	-41%	-18%	-27%	-30%	-14%
12:00	-26%	-30%	4%	-9%	-13%	-22%	-12%	-43%	-15%	-24%	-35%	-12%
13:00	-24%	-27%	-2%	-8%	-12%	-22%	-7%	-40%	-16%	-20%	-35%	-9%
14:00	-21%	-24%	1%	-11%	-14%	-21%	-8%	-37%	-16%	-20%	-34%	-6%
15:00	-23%	-25%	-2%	-10%	-18%	-19%	-9%	-39%	-13%	-19%	-32%	-5%
16:00	-16%	-27%	6%	-13%	-17%	-21%	-15%	-40%	-14%	-17%	-29%	-4%
17:00	-23%	-29%	3%	-17%	-16%	-26%	-18%	-42%	-13%	-19%	-23%	-5%
18:00	-29%	-30%	3%	-15%	-9%	-22%	-14%	-42%	-17%	-21%	-24%	-8%
19:00	-32%	-35%	0%	-17%	-15%	-25%	-18%	-45%	-18%	-21%	-25%	-13%
20:00	-35%	-36%	-6%	-13%	-6%	-20%	-15%	-43%	-8%	-22%	-28%	-15%
21:00	-34%	-36%	-12%	-13%	2%	-21%	-10%	-43%	-6%	-25%	-29%	-11%
22:00	-30%	-36%	-17%	-16%	-13%	-22%	-3%	-45%	-5%	-23%	-30%	-16%
23:00	-28%	-42%	-19%	-13%	-19%	-24%	-3%	-39%	-6%	-27%	-37%	-20%

Table 7 St Chads Heatmap table percentage change 2019 to 2021

Figure 5 on the following page provides heatmap tables for the air quality units within the zone and the ring road for 2021. St Chads continues to have the highest levels of NO₂ within the Clean Air Zone. These heat maps are replicated in detail in Appendix B.

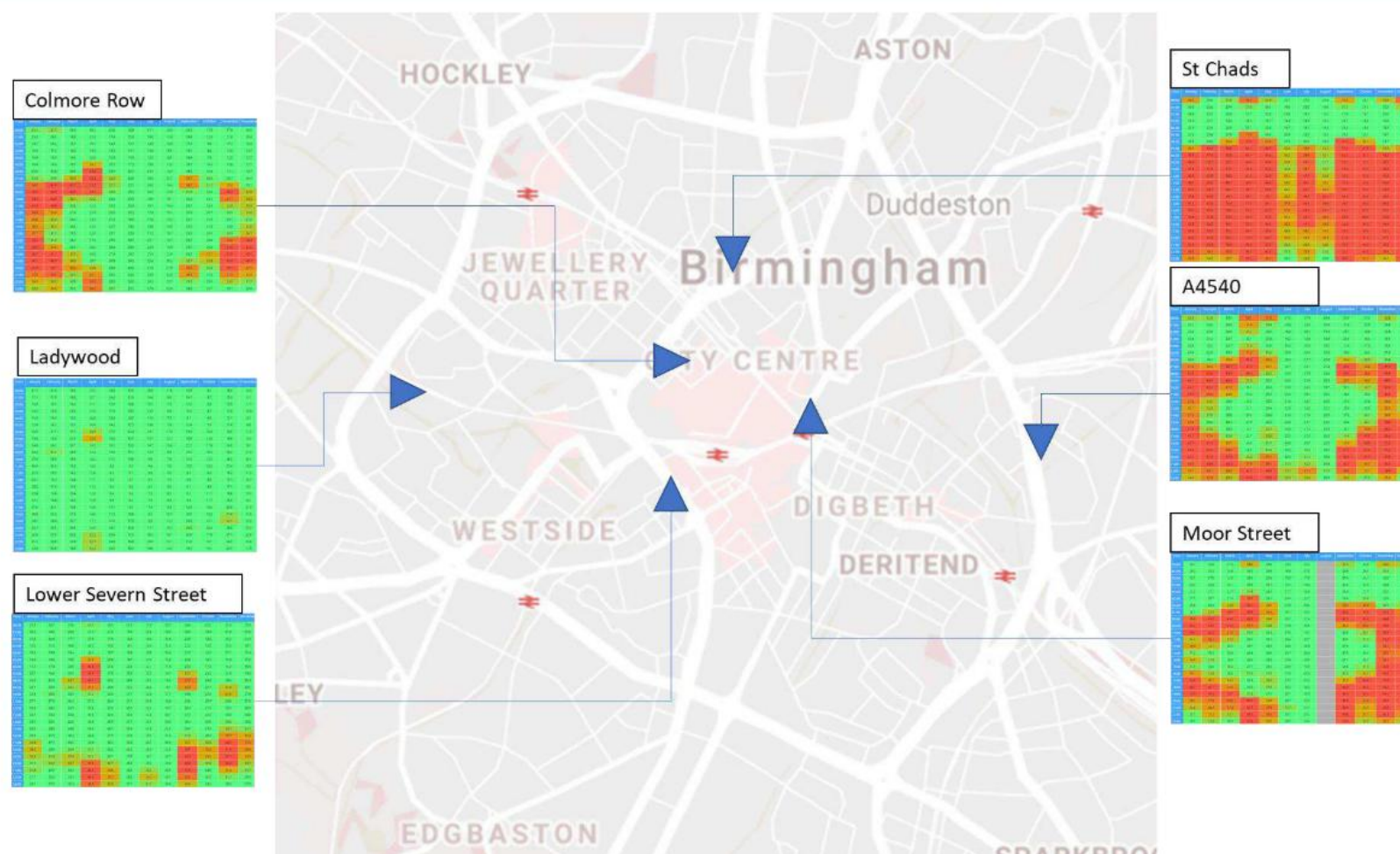
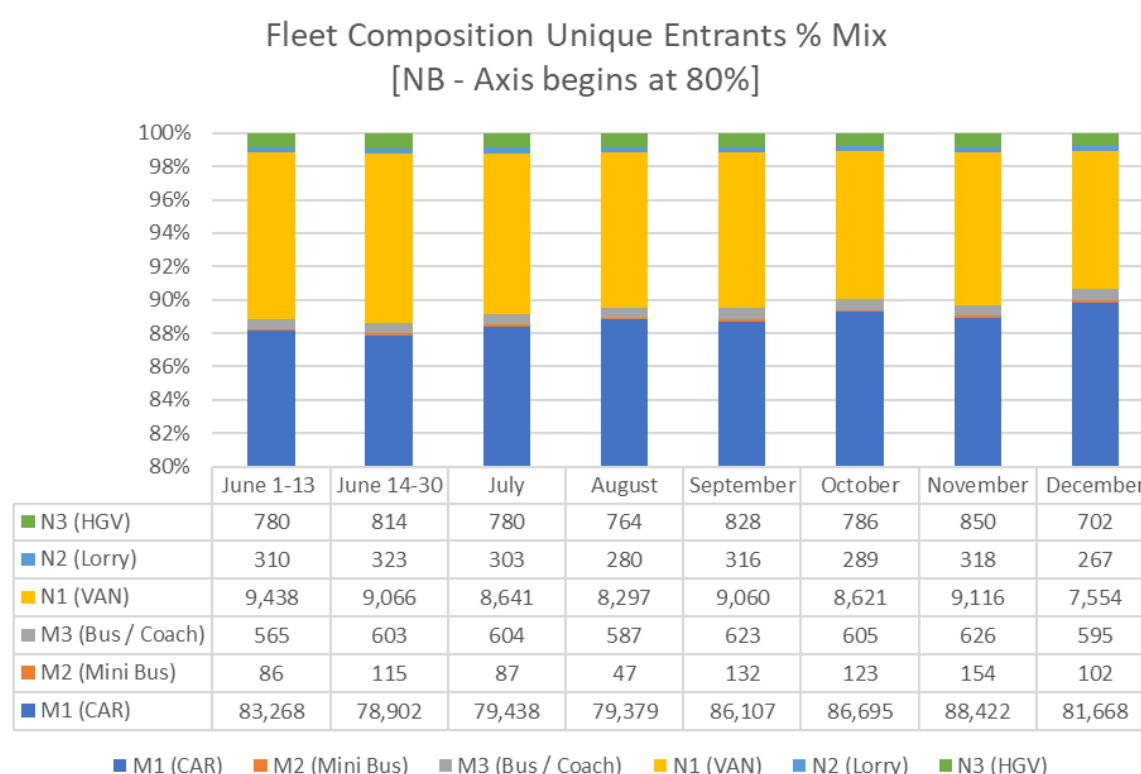


Figure 5 Automatic air quality units, Nitrogen Dioxide heat map tables. The vertical column provides hours vs months horizontally. The colour range is set to 30 - 40. Meaning anything above 30 is coloured a shade of orange, anything above 40 is shaded red. Full Details of the heatmap tables are provided in Appendix B.

4.0 – HOW HAS FLEET COMPOSITION CHANGED?

The fleet mix within the Clean Air Zone is dominated by cars, which account for 88% of all unique vehicles entering the zone. The next largest group of vehicles within the zone are Light Goods Vehicles (Vans [N1]), which account for approximately 10% of the fleet as shown in Table 7 below.

Table 8 below provides a breakdown of the various vehicle categories. Whilst there has been some fluctuation over the months it is unclear if the Clean Air Zone has driven a change in fleet composition.



	Jun 1-13	Jun 14-30	Jul	Aug	Sep	Oct	Nov	Dec
Total (excluding unrecognised)	94,446	89,822	89,852	89,355	97,067	97,120	99,485	90,888
M1 (CAR)	88.2%	87.8%	88.4%	88.8%	88.7%	89.3%	88.9%	89.9%
M2 (Mini-Bus)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
M3 (Bus / Coach)	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.7%
N1 (VAN)	10.0%	10.1%	9.6%	9.3%	9.3%	8.9%	9.2%	8.3%
N2 (Lorry)	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
N3 (HGV)	0.8%	0.9%	0.9%	0.9%	0.9%	0.8%	0.9%	0.8%

Table 7 Clean Air Zone fleet composition June to December 2021

5.0 – HOW HAS TRAFFIC VOLUME AND COMPLIANCE RATES CHANGED?

ROAD TRAFFIC VOLUME

Covid has had a significant impact on road traffic volumes over the last two years. Figure 6 provides a profile of road traffic at the A38(M) that is based on road traffic loop counters. The graph is annotated with the various lockdown restrictions that Birmingham was under due to Covid. During the first lockdown in March 2020 road traffic dropped to one sixth of the levels compared to pre Covid. The second and third lockdowns also had an impact on road traffic but at a much more reduced rate compared to the first lockdown.

Whilst the restrictions are now easing road traffic across the network appears to be approximately three quarters of pre-Covid levels. At the same time, the Clean Air Zone appears to have had a negligible impact on road traffic flows on the A38M.

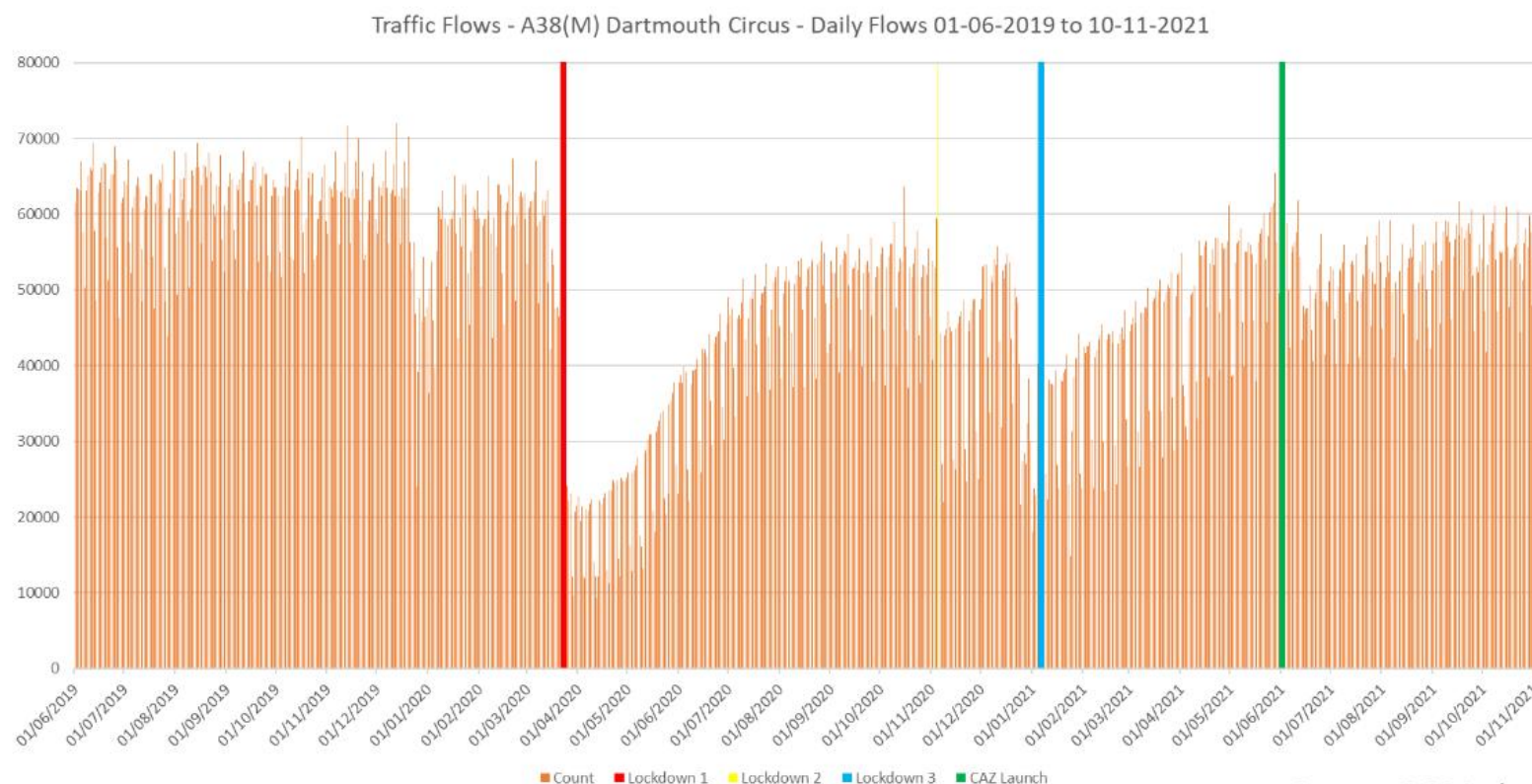
Figure 6 provides a comparison of road traffic flows of the inner city (Clean Air Zone) vs the ring road.

When the Clean Air Zone launched there was a reduction detected in the inner city. However, this was not reflected by a corresponding increase on the ring road which suggests that a significant displacement of traffic from the Clean Air Zone to the ring road did not occur.

It should also be noted that the zone launched in June when schools had or were due to finish for the summer and the holiday season was just beginning.

Therefore, whilst the graph appears to show a reduction in road traffic in the inner city when the scheme became operational, other factors may have played a part. Since the introduction of the Clean Air Zone the volume of road traffic was steadily increasing, which suggests that the Clean Air Zone has not been a significant influence on decisions to cancel or re-route journeys through the zone.

A38(M) Daily Traffic Flows



Source: BCC Induction loops

Figure 6 A38M Road Traffic Counts annotated with the various Covid19 lockdown events from June 2019 to November 2021

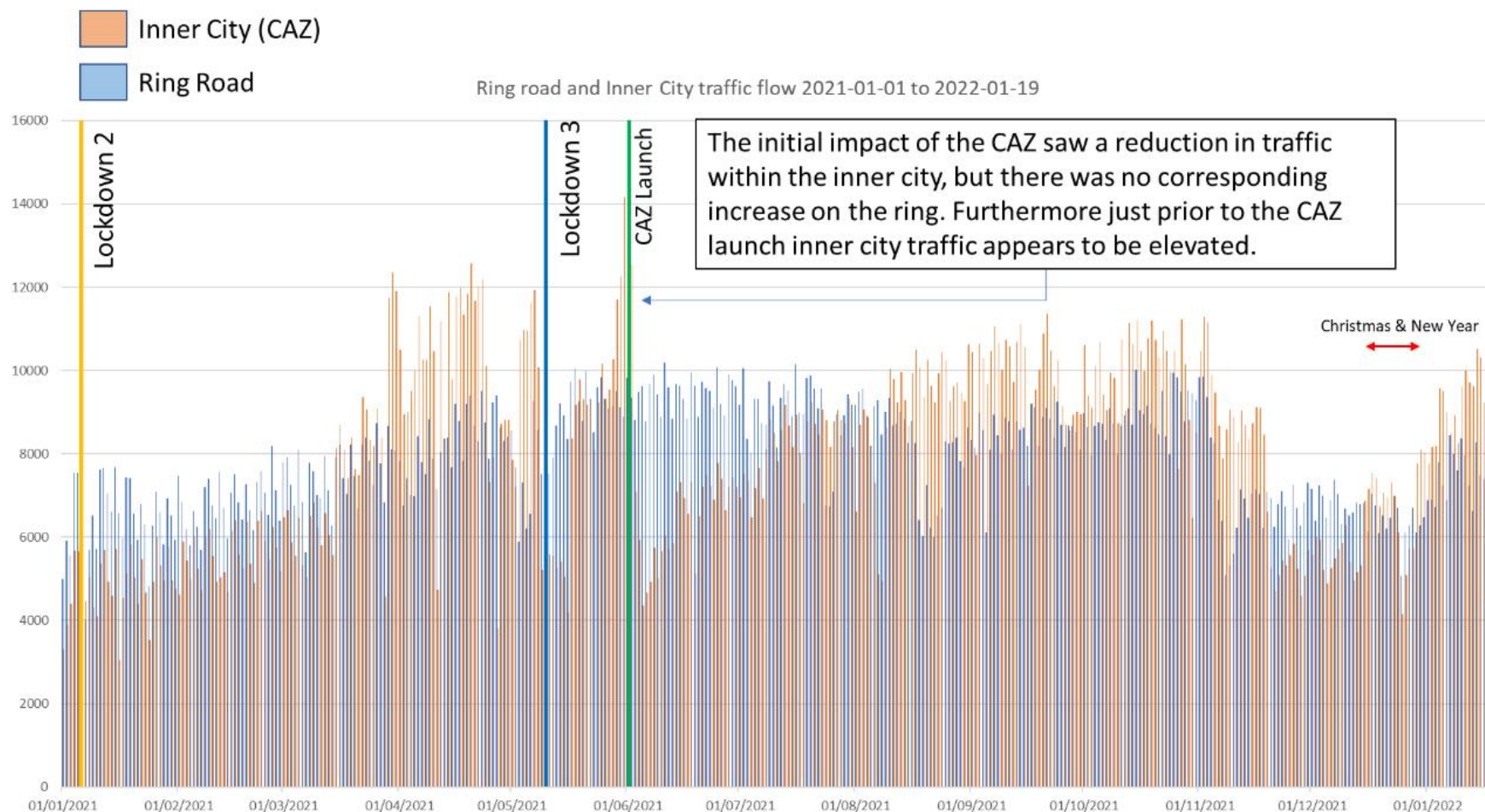


Figure 7 Ring Road and Inner City (Clean Air Zone) traffic flows from January 2021 to January 2022

OVERALL COMPLIANCE RATES

To enforce the Clean Air Zone there is a network of Automatic Number Plate Recognition Cameras (ANPR) which capture the registration number of the vehicles that pass by. Vehicles that enter the zone are checked against the DVLA database to determine whether they comply with the relevant emission standard, along with the vehicle category (Car, Van, Bus, HGV etc).

Figure 8 provides the daily unique entrants into the Clean Air Zone from June to December 2021. Since the charging of the Clean Air Zone came into effect on 14th June 2021, there was a marked change in compliance rates.

The volume of non-compliant vehicles reduced by almost 10,000 unique vehicles from approximately 21,000 to 11,000. However, there was not a corresponding increase in compliant vehicles. It could therefore be assumed that the reduction in inner city traffic evidenced in Figure 8 was primarily driven by a reduction in non-compliant vehicles, which is the desired effect of the scheme.

Furthermore, as discussed in the previous section in Figure 7 there was not a marked increase in traffic on the ring road, therefore it could be concluded that the Clean Air Zone began to achieve its desired effect of reducing the volume of non-compliant vehicles without significant displacement occurring.

Further work is required to understand if these journeys were cancelled, or alternative methods of travel were employed such as car sharing or public transport.

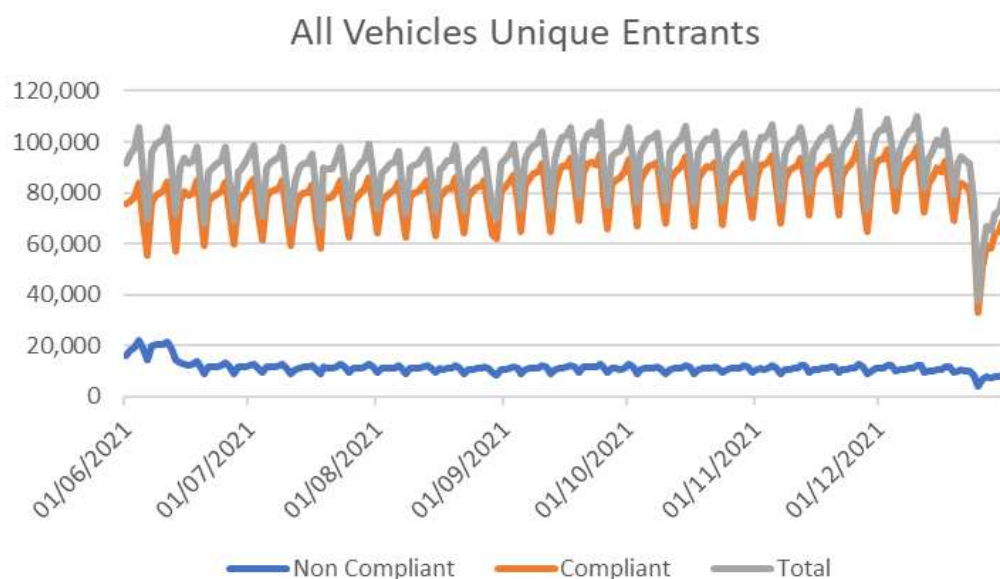


Figure 8 Daily unique entrants into the Clean Air Zone

There is also a clear fluctuation from weekday vs weekend traffic, as expected. The volume of unique vehicles shows some variation of the last six months, which may be due to holiday season, school return, easing of Covid restrictions and the introduction of the Clean Air Zone. A longer data set is required to determine what factors are influencing traffic post the removal of Covid restrictions.

Table 8 below compares Thursday 10th June 2021 pre-Clean Air Zone daily fee, to the following Thursday, 17th June 2021, when the Clean Air Zone daily fee was applied to vehicles. Thursday has been chosen as a ‘normal weekday’. It should be noted that this data does not include exempt or unrecognised vehicles.

As shown, there is little impact on compliant vehicles, which is encouraging. The greatest change is within the car and van non-compliance rates over this period, which reduced by - 7,728 unique vehicles.

	Compliant	Compliant	Compliant	Non - Compliant	Non - Compliant	Non - Compliant
	10 June	17 June	Difference	10 June	17 June	Difference
Cars	69,382	69,028	-354	15,289	9,003	-6,286
Vans	7,720	7,688	-32	4,345	2,951	-1,394
HGVs	1,269	1,247	-22	140	88	-52
Bus/Coach	575	583	-8	7	3	-4
TOTAL	78,946	78,546	-416	19,781	12,045	-7,728

Table 8 Compliant and Non-Compliant vehicle rates 10th June vs 17th June 2021

The Clean Air Zone full business case outlined target rates of compliance for 2022 in a ‘do nothing’ scenario and a compliance ‘target’.

Due to delays in the implementation of the Clean Air Zone the originally modelled year of compliance (2022) is not likely to be achieved, however the target values themselves are still valid and will continue to be used as a guide for when compliance with the legal limit for NO₂ (40µg/m³ annual average) can be achieved.

Figure 9 provides the daily compliance rate in percentage compared to that predicted and Figure 10 provides a monthly average.

The full business case outlined a target of 96.5% overall compliance in the Clean Air Zone D scenario. At the beginning of June 2021, the overall rate of compliance was 79.8%, which has steadily increased to 88.8% in December 2021. This implies there is a difference of 7.7 percentage points between the actual rate of compliance and the target. The following sections will discuss each vehicle category to better understand the nuances of the traffic composition and the rates of compliance.

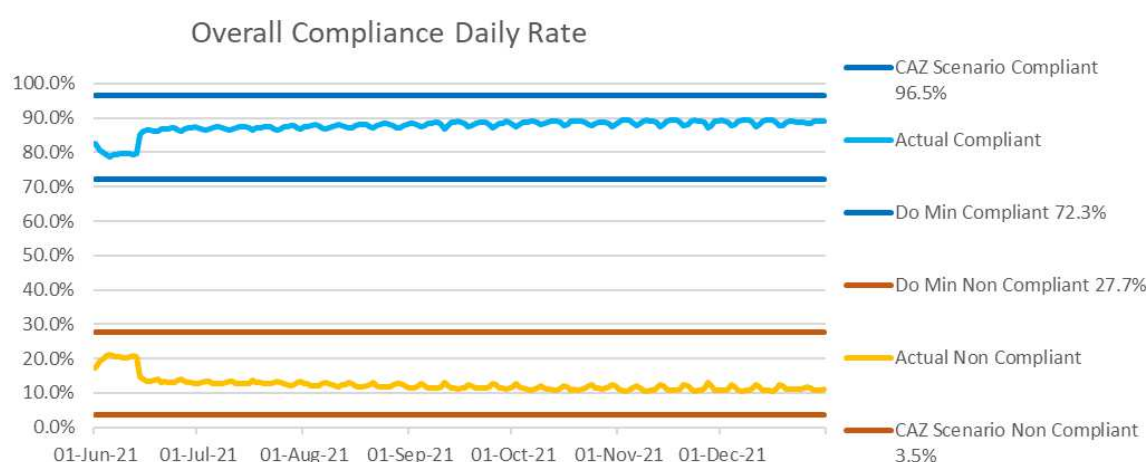


Figure 9 Overall Daily Compliance Rates vs Predicted

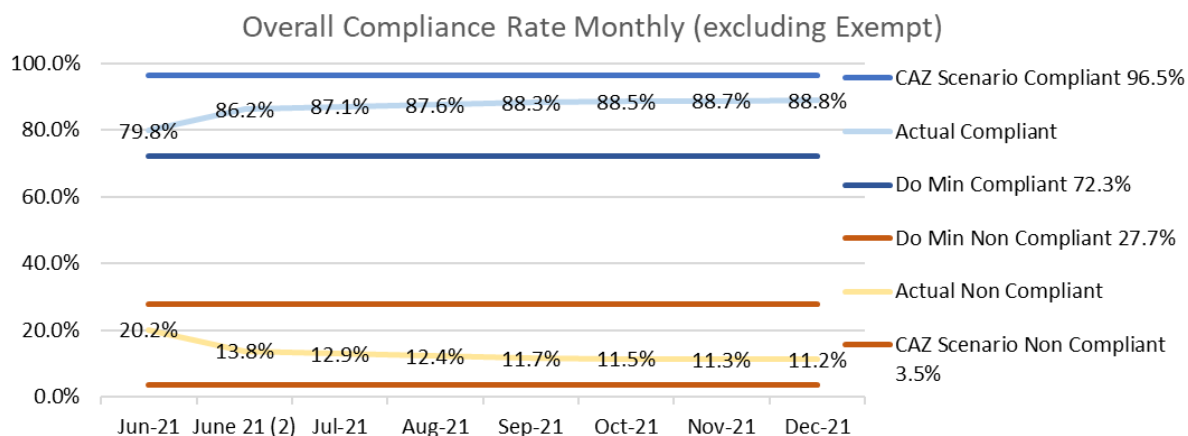


Figure 10 Overall Monthly Compliance Rates vs Predicted

CARS (M1) COMPLIANCE RATE

Figure 11 provides the numbers of average daily unique vehicle entrants (passenger cars) into the zone from June 2021 to December 2021.

When the daily fee came into effect on 14th June 2021 the volume of unique non-compliant vehicles dropped from approximately 15,000 to 9,000. Compliance rates for this category has steadily increased from 81.8% in June 2021 to 89.0% in December 2021 as shown in Figure 12 and 13. The targeted rate of compliance was 98%. The weekday vs. weekend variations are visible within the unique entrants, whereas the percentage variation is less pronounced.

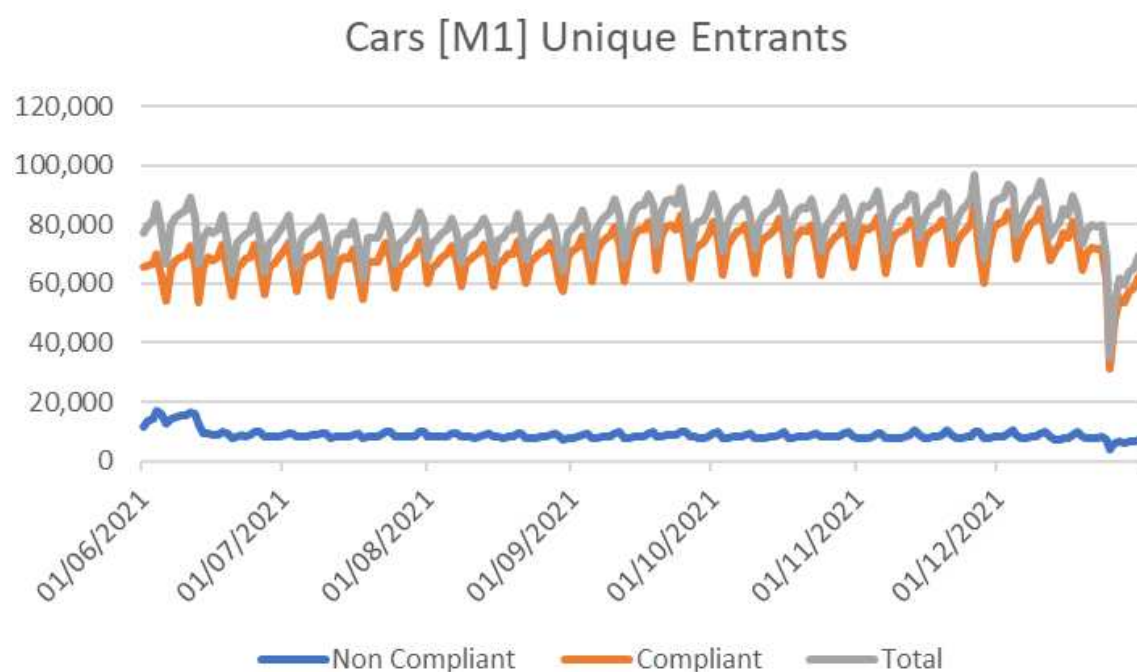


Figure 11 Unique Daily Car Entrants into the Clean Air Zone

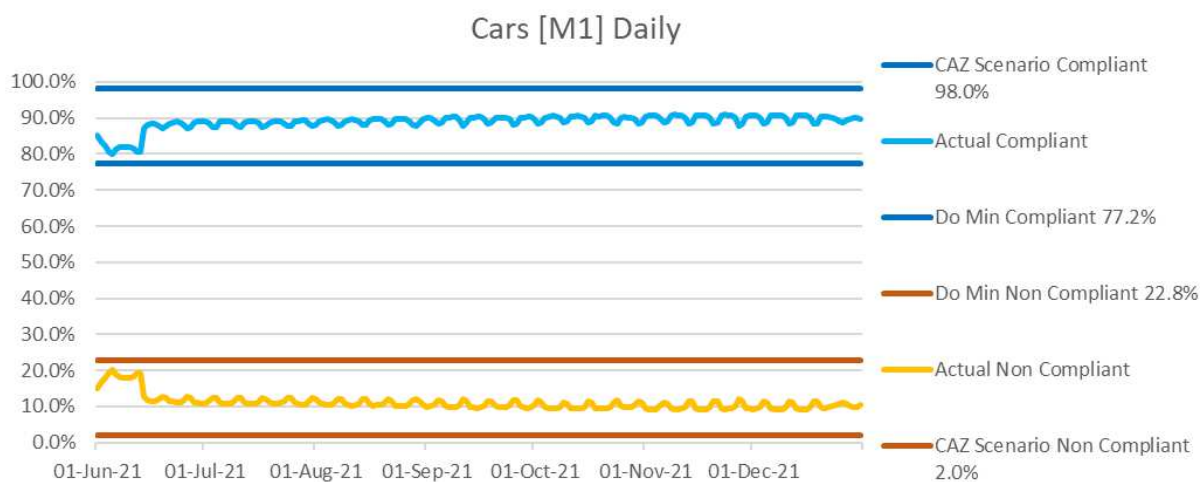


Figure 12 Daily Car Percentage Compliant and Non-Compliant vs predicted.

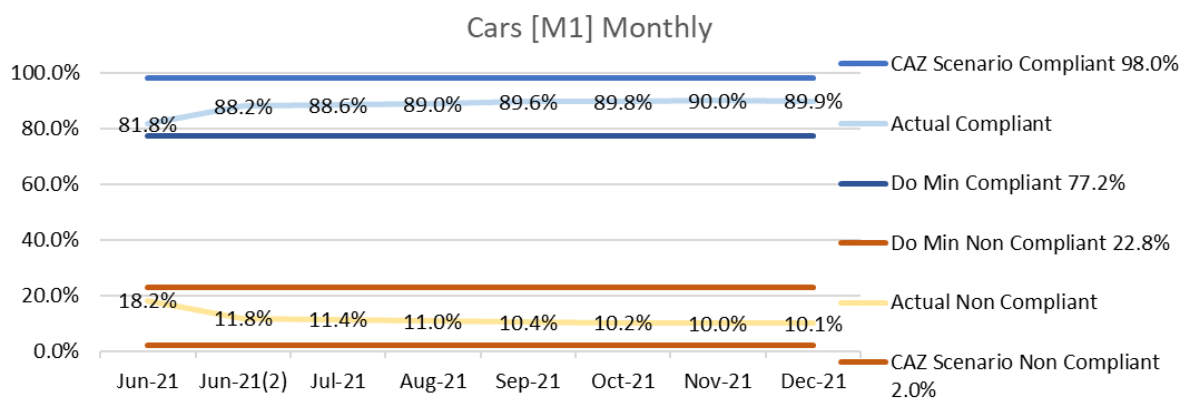


Figure 13 Monthly Car Compliance Rates vs Predicted

LIGHT GOODS VEHICLES (LGV [N1])

Figure 14 Light Goods Vehicles (LGV) [N1] show a significant variation of weekday vs. weekend with regards to volume of vehicle. This is also reflected in the compliance rates with the weekends seeing a greater percentage of non-compliant vehicles compared to weekdays. The business case for the scheme set out an aim of being 82.7% compliant which currently stands at 77.4% on the monthly average as shown in Figures 15 and 16.

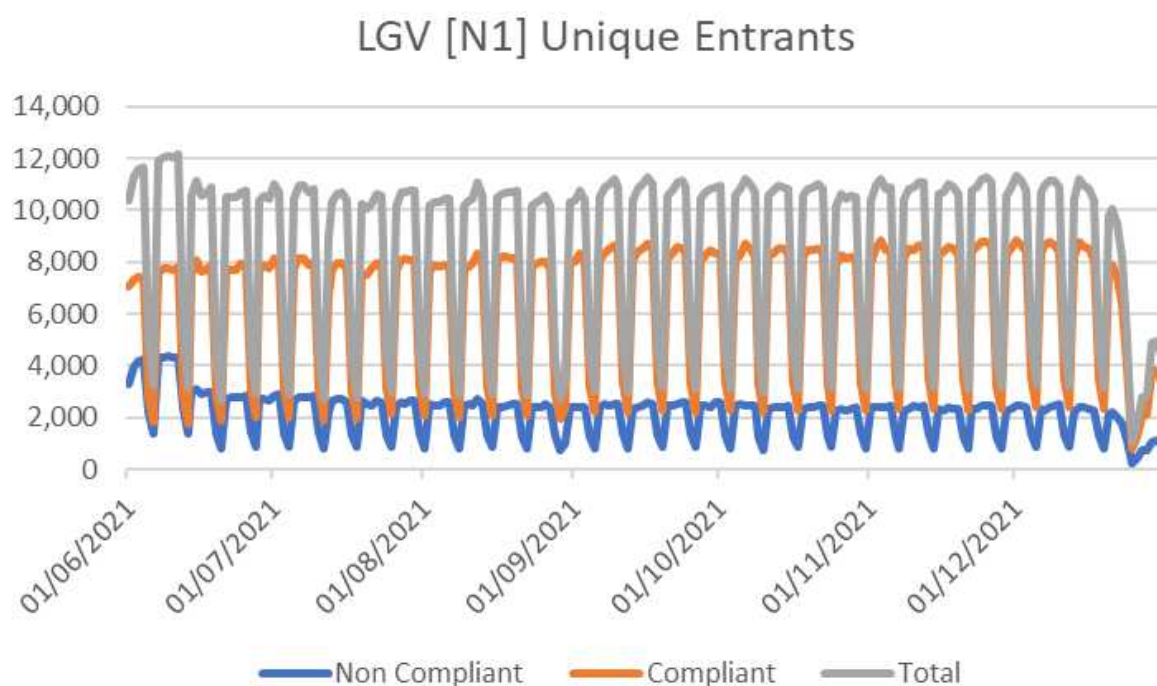


Figure 14 Light Goods Vehicles Daily Unique Entrants

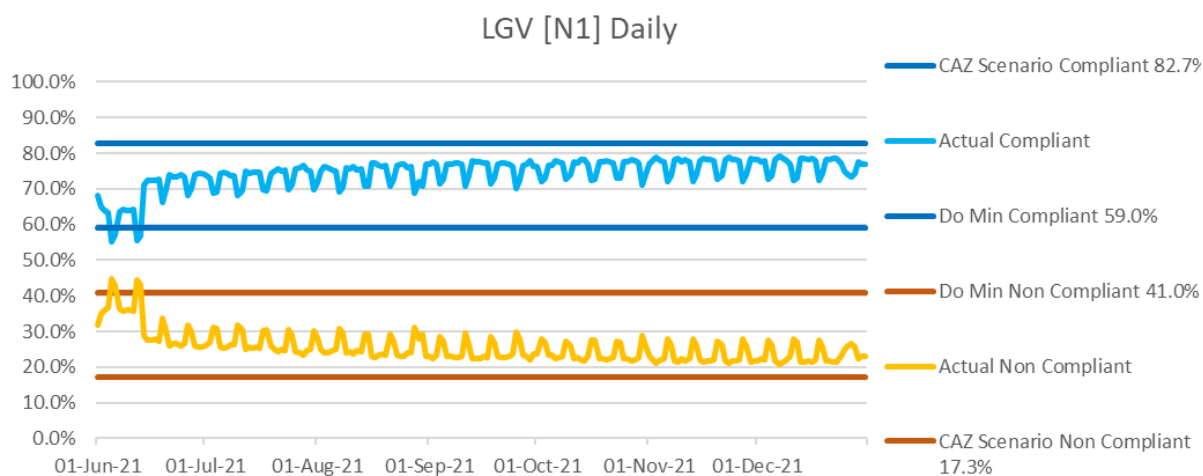


Figure 15 Daily percentage compliant, non-compliant Light Goods Vehicles vs predicted

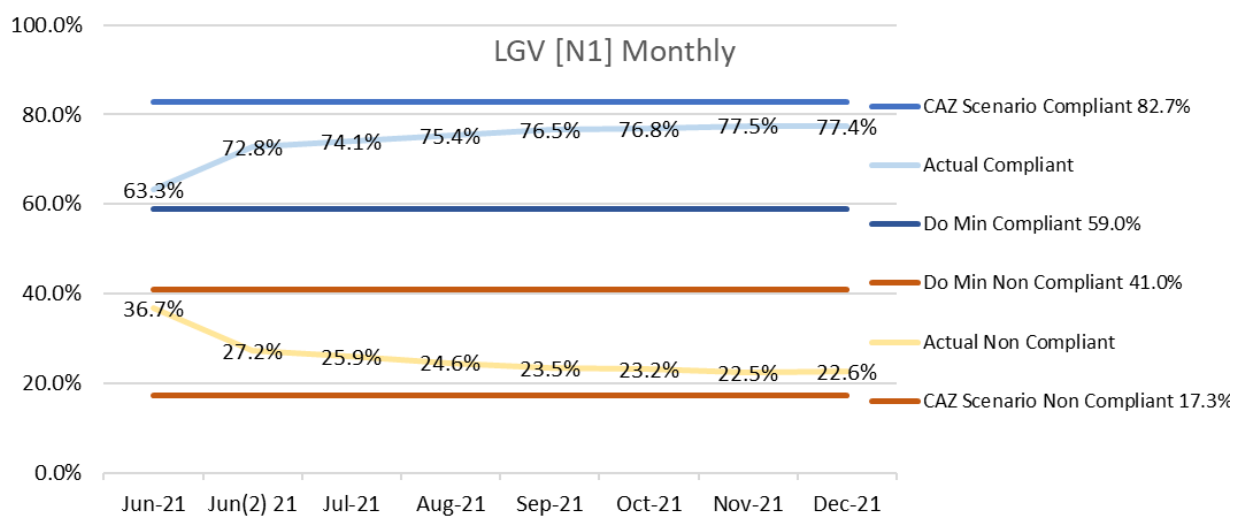


Figure 16 Monthly percentage compliant, non-compliant Light Goods vehicles vs predicted

HEAVY GOODS VEHICLES (HGVs [N2, N3])

Figure 17 provides the daily entrants of unique Heavy Goods Vehicles (HGV) entrants. Compliance rates have shown a steady improvement in compliance rates since the introduction of the scheme. Compliance rates at the launch of the zone were 90.4% in June 2021, which has improved to 94.8% in December 2021.

Figure 18 provides the daily compliance rates which show a significant fluctuation between weekday vs weekends. On weekdays there are on average 1,400 unique vehicles entering the zone, whereas on Sundays, there are approximately 280 unique HGVs entering the city centre. Overall HGV compliance rate is on track with the predicted rate of compliance. Figure 19 provides the monthly compliance rates compared to the predicted which indicates a gradual improvement.

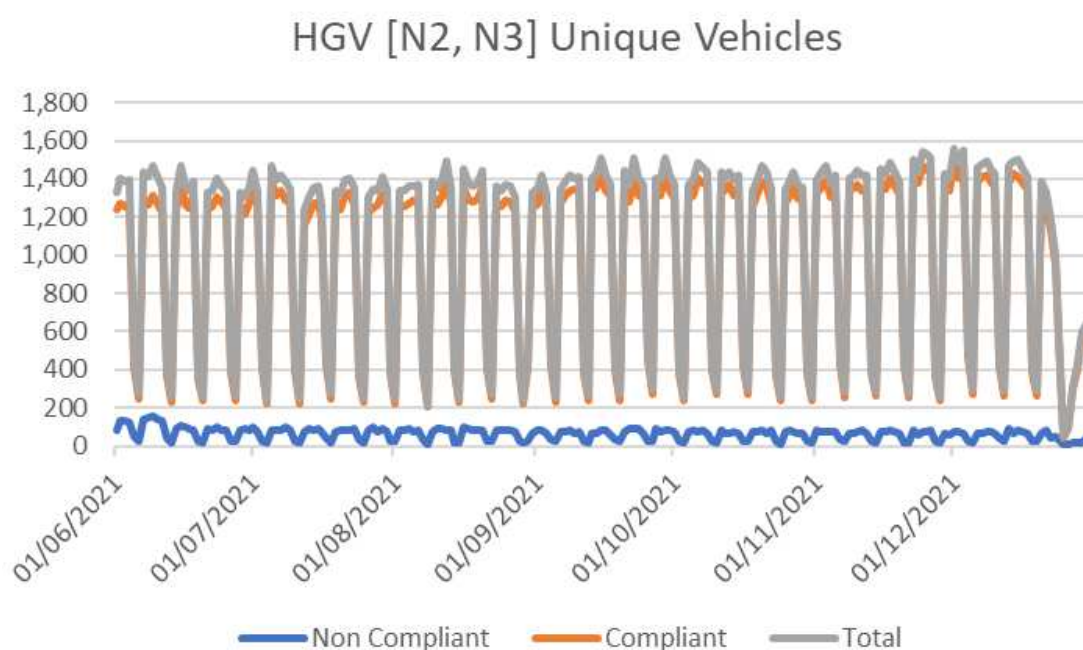


Figure 17 Heavy Goods Vehicles daily unique entrants

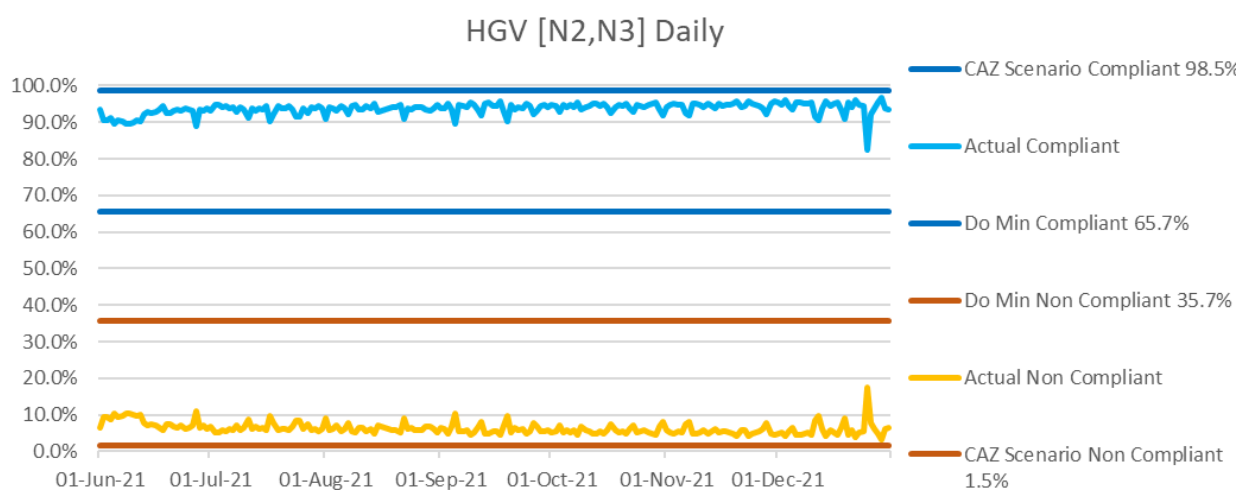


Figure 18 Heavy Goods Vehicles (HGV) compliant, non-compliant percentage vs predicted

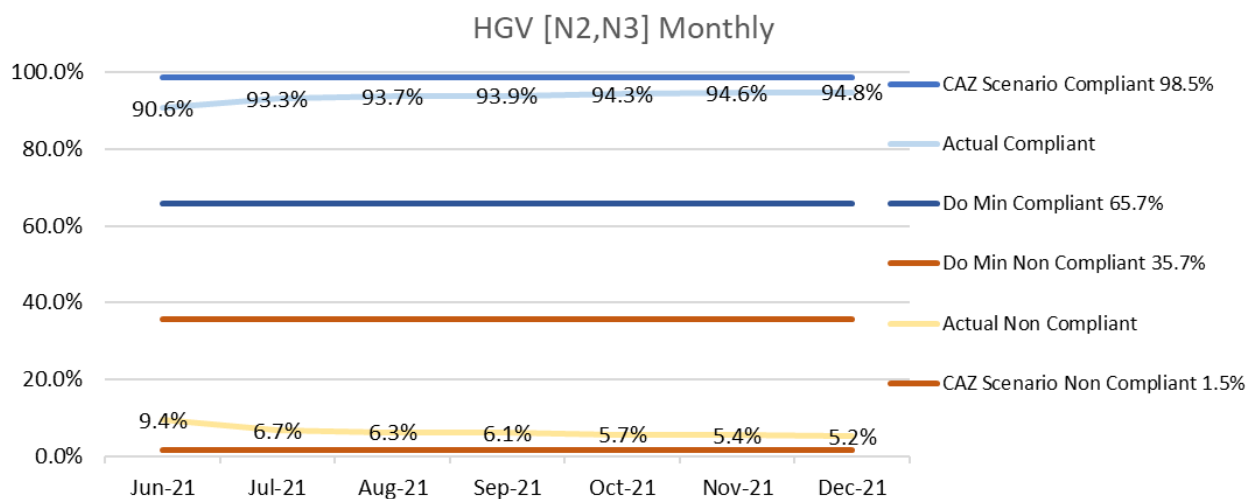


Figure 19 Heavy Goods Vehicles (HGV) Monthly compliant, Non-compliant vs predicted.

BUSES / COACHES [M3]

Figure 20 for bus / coaches shows there is significant fluctuation between weekdays and weekends. This is likely driven by less buses operating on the weekends.

Figures 21 and 22 demonstrate that bus and coach compliance is very high at 98.8%, which is slightly less than the aim of 100% compliant. However, it should be noted that the introduction of hydrogen buses will provide greater benefits to the level of NO₂

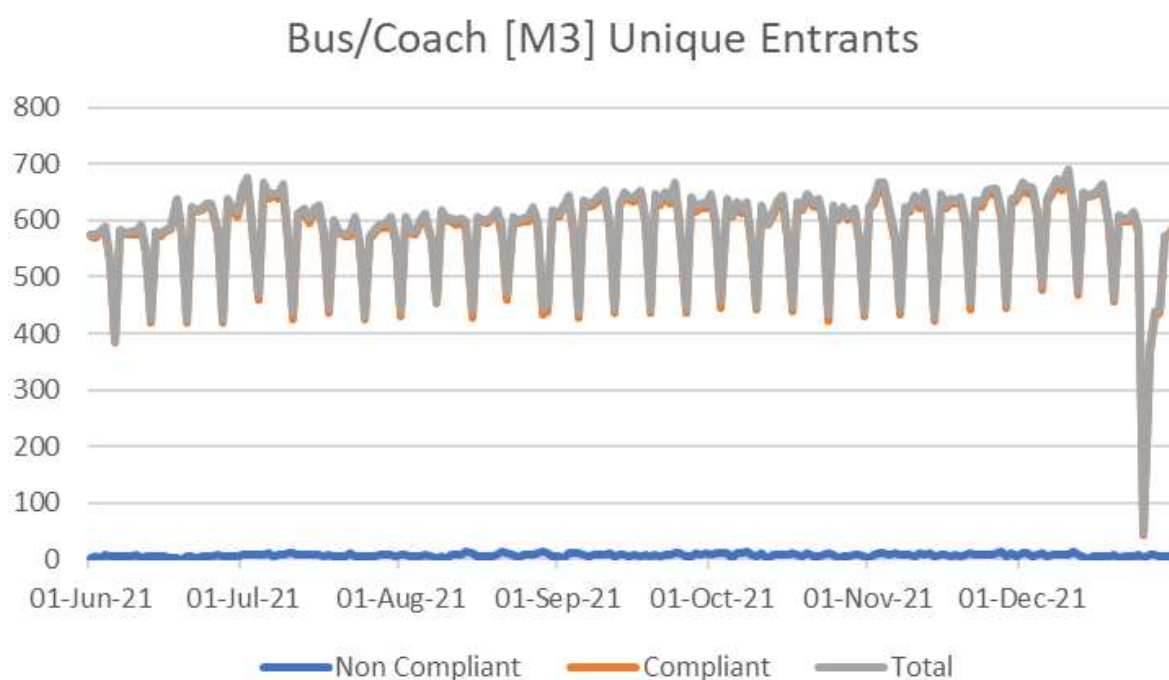


Figure 20 Bus / Coach daily unique entrants

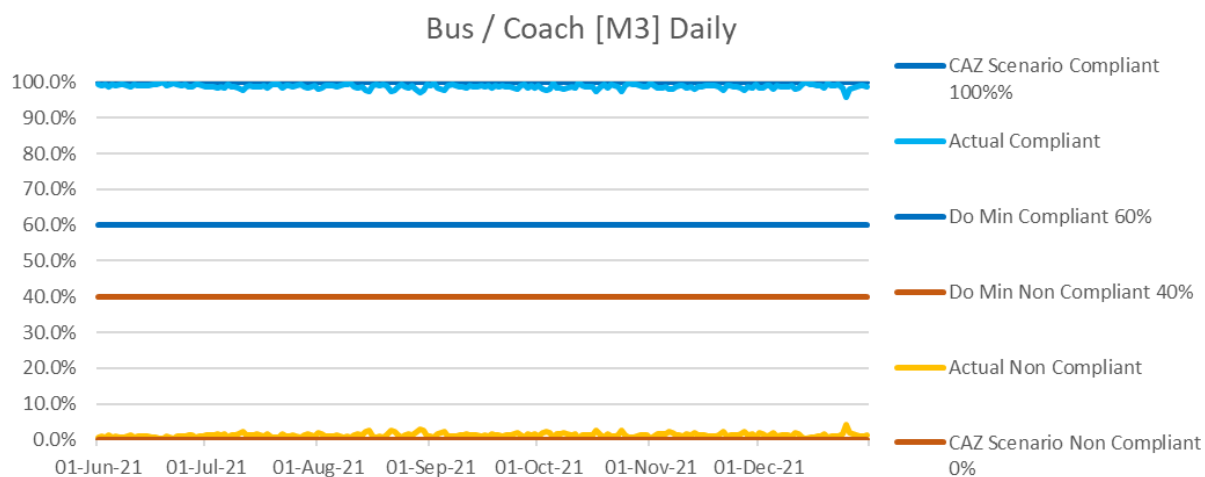


Figure 21 Bus / Coach compliant, non-compliant percentage vs predicted

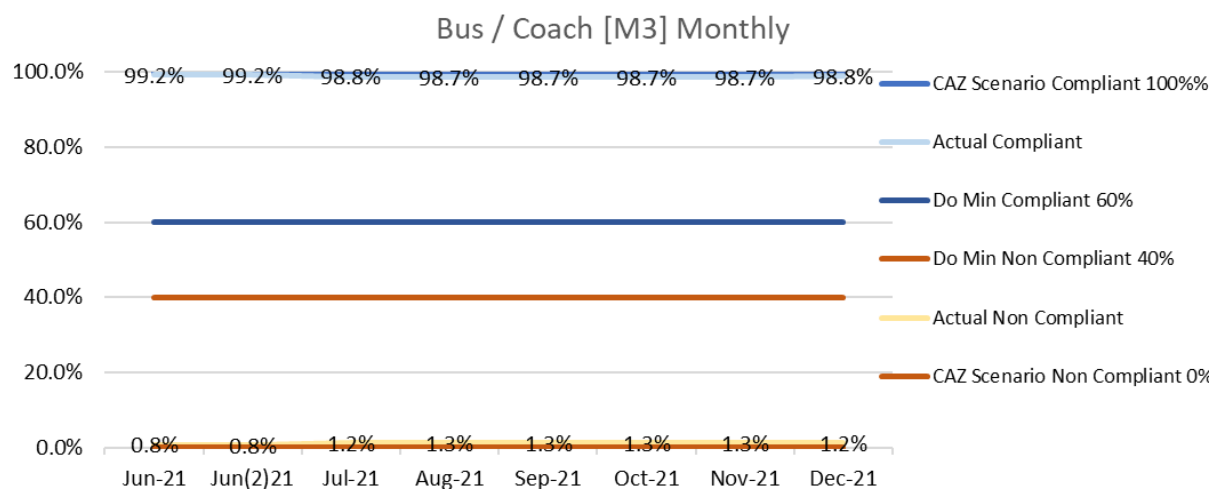


Figure 22 Bus / Coach compliant, non-compliant percentage vs predicted monthly average

APPENDIX A

Diffusion Tube Group, ID, Name and Grid Reference.

ID	Diffusion Tube Name (within the clean air zone)	Lat	Long
BHM63	Chapel Lane (Aston University Post)	52.48291	-1.89086
BHM90	Lionel Street	52.48362	-1.90386
BHM26	Nelson JI	52.48127	-1.91826
BHM62	Snow Hill Station Courtyard	52.48264	-1.89787
BHM61	St Phillips Churchyard	52.48121	-1.89955
BHM92	Bristol Street (2)	52.47114	-1.90010
BHM51	Bristol Street Monaco House	52.47133	-1.89954
BHM35	Cafe Nero	52.48084	-1.89575
BHM16	Children's Hospital	52.48565	-1.89362
BHM39	Corporation St LP corner Old Square	52.48187	-1.89454
BHM34	Corporation St SuperDrug	52.48003	-1.89668
BHM36	Corporation St Taxi rank sign	52.48146	-1.89534
BHM30	Curzon Street	52.48223	-1.88412
BHM59	Dale End Corner of Lower Bull St	52.48026	-1.89427
BHM65	Digbeth	52.47618	-1.89180
BHM24	Great Charles Street (1)	52.48186	-1.90394
BHM28	Great Charles Street (2)	52.48384	-1.90186
BHM88	Great Charles Street (3)	52.48371	-1.90131
BHM89	Great Charles Street (4)	52.48194	-1.90433
BHM58	High St Corner of Carrs Lane	52.47964	-1.89461
BHM45 (2)	Hotel La Tour - LP	52.48105	-1.88979
BHM23	Lower Severn Street	52.47676	-1.90215
BHM46 (2)	Masshouse Lane	52.48130	-1.89030
BHM43	Masshouse Lane post adjacent Masshouse	52.48186	-1.88936
BHM44	Masshouse Lanepost lighting shop	52.48196	-1.88911
BHM42	Moor St Queensway Post adjacent Masshouse	52.48184	-1.89029
BHM53	Moor St Queensway	52.47880	-1.89314
BHM55	Moor Street	52.47880	-1.89314
BHM56	New Meeting St lamppost adjacent Church	52.47994	-1.89281
BHM8	O' Neills Broad Street **	52.47612	-1.91289
BHM41	Priory Queensway	52.48158	-1.89248
BHM40	Priory Queensway	52.48170	-1.89236
BHM86	Ronald McDonald House	52.48592	-1.89595
BHM33	Severn Street	52.47650	-1.90277
BHM87	St Chads (2)	52.48628	-1.89596
BHM64	Stephenson Street	52.47864	-1.89876

ID	Diffusion Tube Name (within the clean air zone)	Lat	Long
BHM07	The Brasshouse, Broad Street	52.47759	-1.91143
BHMCL	Carrs Lane	52.479708	-1.894017
BHMHS	Hill Street	52.477089	-1.900605
BHMNS	Navigation Street	52.477693	-1.902385
BHMSN	Snow Hill Bridge	52.485737	-1.900703
BHMWL	Wheeley's Lane	52.471218	-1.911453

ID	Tube Name (within the ring road)	Lat	Long
BHM79	Alexandra Road	52.46479	-1.8929047
BHM80	Belgrave Middleway	52.46505	-1.8927274
BHM85	Dartmouth MW (2)	52.49028	-1.8865248
BHM82	Highgate MW	52.46572	-1.8839531
BHM68	Icknield Street (1)	52.49106	-1.9162877
BHM69	Icknield Street (2)	52.49093	-1.9159197
BHM74	Islington Row (2)	52.47133	-1.912895
BHM21	Lawley Middleway	52.48441	-1.8807233
BHM84	Lawley Middleway (2)	52.48425	-1.8811065
BHM78	Lee Bank MW - opposite St Lukes	52.46666	-1.8996859
BHM77	Lee Bank MW - St Lukes	52.46705	-1.8993317
BHM75	Lee Bank MW by School	52.46946	-1.9078789
BHM76	Lee Bank MW opposite School	52.46899	-1.9078946
BHM72	Leyburn Road	52.47546	-1.9236196
BHM81	Moseley Road	52.46563	-1.8834676
BHM67	New John Street West (1)	52.49273	-1.8975059
BHM66	Newtown Middleway	52.49253	-1.8916739
BHM71	Rann close	52.47578	-1.9233982
BHM27	Waterlinks	52.49027	-1.8860683
BHM83	Watery Lane (2)	52.47593	-1.8754312
BHM25	Watery Lane Middleway	52.47596	-1.8750189

ID	Tube Name (wider city)	Lat	Long
BHM03	28 High Street	52.4371	-1.8927804
BHM09	37 Shelley Drive **	52.51997	-1.8744227
BHM5(2)	448 Stratford Road	52.4553	-1.8673956
BHM20	641 Bristol Road	52.44396	-1.9359879
BHM4 (2)	75 High Street	52.43621	-1.8925619
BHM57	Chantry Road	52.44824	-1.8883247
BHM37	Church Road	52.46575	-1.9221938
BHM19	Middleton Hall Road	52.41529	-1.9317508
BHM99	Pershore Road	52.43536	-1.9180109
BHM11	Stratford Road outside Aldi 2	52.45921	-1.8716371
BHM12	Stratford Road outside Aldi 3	52.45921	-1.8716371
BHM17 (2)	Tyburn (39)	52.50776	-1.8539486
BHM18 (2)	Tyburn (40)	52.50779	-1.853035
BHM01	11 Fox Green Crescent	52.44266	-1.8364949
BHM91	Adderley Street	52.48928	-1.8615795
BHM02	Langleys Road	52.43711	-1.9413816
BHM10	Stratford Road outside Aldi 1	52.45921	-1.8716371

APPENDIX B

Automatic Air Quality Units Heatmap Tables, range set at 30 – 40. Anything above 30 is shaded in orange anything above 40 is shaded in red. For details of the air quality stations please see [the Birmingham Air Quality website](#).

Colmore Row 2021 Roadside Lat 52.481789 Long -1.8987386 (Range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	31.1	31.7	26.4	30.1	22.6	19.9	21.1	16.6	22.3	17.9	27.8	26.9
01:00	25.3	26.1	18.6	23.8	17.4	15.8	19.0	13.6	19.8	12.9	21.0	20.8
02:00	19.7	20.2	15.7	19.1	14.7	11.7	14.9	10.0	17.4	9.8	15.7	16.4
03:00	18.6	17.2	14.0	19.0	13.3	11.1	13.0	8.9	13.1	8.2	13.2	14.7
04:00	16.9	18.0	16.4	25.8	13.9	11.5	13.3	8.8	14.4	7.9	12.2	12.7
05:00	16.6	18.5	19.5	34.7	20.1	17.3	18.0	13.2	19.2	14.3	12.8	12.7
06:00	23.6	23.8	25.9	45.8	28.0	22.3	23.5	18.5	28.2	22.4	17.1	18.7
07:00	31.4	30.8	34.0	53.3	32.5	25.8	26.6	22.1	35.7	30.5	26.7	26.4
08:00	38.2	42.9	41.3	50.2	32.1	25.1	26.2	19.4	36.7	31.1	35.2	30.1
09:00	45.3	49.9	40.3	39.5	30.9	25.2	24.5	19.0	31.0	28.5	40.3	33.9
10:00	44.2	50.4	33.1	32.2	25.0	23.5	19.6	16.1	25.2	25.1	37.7	34.3
11:00	41.9	39.9	30.8	25.9	23.3	20.4	19.1	15.4	22.1	24.3	32.8	33.5
12:00	38.8	35.9	27.9	23.4	20.8	20.3	17.9	15.1	20.0	20.7	30.5	33.0
13:00	36.8	33.3	26.4	23.0	21.5	18.6	17.8	15.3	22.1	21.2	29.1	31.2
14:00	36.5	33.1	24.8	23.4	22.7	19.0	19.8	18.0	21.2	21.6	28.9	33.0
15:00	37.7	31.2	25.5	23.8	23.7	22.9	21.2	19.1	23.5	26.5	30.9	34.1
16:00	42.3	31.6	28.2	27.0	27.5	24.7	22.1	19.3	25.3	24.9	38.0	39.8
17:00	45.5	35.6	29.5	29.0	28.4	24.9	22.8	19.6	25.7	29.2	41.6	43.2
18:00	46.0	41.1	33.5	28.8	27.8	24.3	25.4	22.0	29.3	35.1	42.9	40.5
19:00	45.1	42.4	34.0	29.7	26.9	24.3	22.8	20.2	32.1	33.8	44.8	40.1
20:00	41.7	39.7	36.3	33.8	26.8	23.5	21.8	21.6	36.9	31.2	39.7	37.1
21:00	37.8	39.1	32.5	36.7	29.3	24.8	24.9	24.2	36.3	27.4	37.4	35.5
22:00	34.9	34.1	30.9	38.5	28.9	26.0	28.5	23.7	31.2	26.6	33.0	31.7
23:00	33.2	34.6	30.3	38.1	30.7	25.3	27.4	22.4	29.9	25.7	29.1	29.4

Ladywood 2021 Urban Background Lat 52.476648 Long -1.9250898 (range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	21.1	21.8	18.5	27.4	15.9	13.5	16.9	11.8	15.9	9.1	18.2	16.5
01:00	17.1	17.9	16.6	22.7	14.6	11.0	14.4	8.6	14.1	6.7	15.3	13.1
02:00	15.6	16.7	14.3	21.2	12.9	10.8	13.1	7.3	12.0	5.9	12.5	11.7
03:00	14.2	15.0	13.4	21.8	11.9	10.2	12.2	6.8	10.0	4.7	11.8	10.9
04:00	12.9	14.0	13.2	24.8	12.4	10.2	11.8	7.5	9.1	4.5	11.1	10.1
05:00	12.9	14.2	13.5	28.4	14.2	12.5	13.6	7.9	12.4	7.3	11.4	9.6
06:00	16.0	17.7	17.7	32.2	17.0	13.4	14.7	11.0	15.6	10.4	15.0	11.2
07:00	19.4	19.2	21.8	35.0	16.9	13.7	13.7	12.1	19.6	14.6	18.6	13.4
08:00	24.6	26.1	26.7	30.5	16.3	13.0	14.7	10.6	22.2	17.9	24.5	18.1
09:00	28.6	31.2	24.9	23.4	13.8	12.1	12.5	8.9	19.0	16.4	28.3	21.4
10:00	27.6	29.6	18.6	18.2	11.1	10.6	9.9	7.9	13.0	12.3	26.3	20.1
11:00	24.6	23.5	15.6	14.3	9.8	9.5	9.4	7.6	10.0	10.0	21.4	18.5
12:00	23.5	19.7	14.2	13.0	9.3	9.1	8.6	7.0	8.5	9.0	18.2	17.5
13:00	22.1	18.2	12.6	11.7	9.6	8.7	8.1	7.5	8.8	9.8	17.1	16.7
14:00	20.2	17.5	11.9	11.3	9.4	8.4	8.1	8.0	8.1	9.9	17.1	18.1
15:00	20.4	18.4	12.4	12.0	9.4	9.6	7.5	8.2	9.1	11.1	18.6	19.5
16:00	23.1	19.9	13.3	12.9	9.9	9.2	7.0	8.5	9.8	11.7	23.4	24.1
17:00	27.8	22.1	13.8	13.6	11.1	9.9	7.4	9.5	12.6	16.6	29.9	27.0
18:00	30.4	25.3	17.3	14.6	11.5	10.8	8.2	10.7	16.0	20.8	31.4	27.0
19:00	29.2	28.4	23.7	17.7	12.5	11.9	8.9	12.3	24.6	22.1	32.7	25.5
20:00	26.7	29.5	24.6	24.9	16.1	12.6	11.1	16.3	30.6	20.0	29.6	23.3
21:00	26.9	27.9	22.8	32.2	23.4	15.0	16.3	16.1	26.6	17.0	27.1	22.8
22:00	25.1	26.5	20.9	32.7	24.9	18.9	20.0	15.1	21.8	16.1	24.3	20.6
23:00	22.6	24.4	18.9	32.2	20.6	18.2	19.6	14.3	19.3	14.1	20.7	17.5

Lower Severn Street 2021 Roadside Lat 52.476749 Long -1.9021365 (range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	23.3	24.7	23.0	31.1	25.0	21.8	25.9	20.7	28.8	20.3	25.9	25.5
01:00	20.2	19.6	20.9	27.3	21.6	17.6	22.8	16.6	26.0	15.4	21.9	21.9
02:00	17.5	16.4	17.7	25.9	17.5	15.9	19.6	13.4	22.8	13.0	18.3	21.3
03:00	15.3	15.3	16.8	24.5	16.9	14.1	18.0	12.5	20.2	12.5	16.5	16.7
04:00	14.2	14.4	18.4	28.3	16.7	14.9	18.9	12.4	21.0	12.1	15.7	15.4
05:00	14.3	14.6	19.8	35.6	20.8	19.7	21.4	14.9	23.6	14.1	15.8	15.0
06:00	17.2	17.4	24.6	40.6	25.0	22.6	22.1	17.4	28.8	17.4	18.0	16.6
07:00	20.7	19.6	29.5	45.0	27.9	25.6	23.2	19.7	33.7	23.2	22.9	19.9
08:00	26.0	25.9	33.7	42.7	26.2	24.8	25.3	19.5	37.7	26.4	29.3	25.3
09:00	29.1	29.9	32.2	37.1	26.8	23.2	24.4	18.1	36.5	25.7	33.6	29.2
10:00	28.4	30.6	28.5	31.2	23.9	21.7	22.9	17.7	29.8	22.4	34.5	27.6
11:00	27.1	27.0	26.3	27.5	25.6	21.1	23.8	18.9	26.6	23.4	30.6	27.0
12:00	25.5	24.5	24.5	25.4	22.9	20.5	23.3	18.7	26.3	21.5	29.5	28.5
13:00	26.7	23.4	22.6	25.5	24.5	20.9	23.8	20.1	27.7	22.2	30.0	28.8
14:00	29.1	23.0	22.5	26.8	26.0	21.1	25.4	20.5	28.4	25.0	30.6	30.0
15:00	29.2	24.8	24.6	26.0	26.1	21.6	25.8	22.3	28.7	27.2	32.5	31.1
16:00	29.5	25.0	26.2	28.8	27.5	22.6	26.5	22.5	31.5	29.2	36.7	35.4
17:00	33.4	27.7	30.0	28.8	28.1	23.8	26.7	24.8	34.7	32.5	42.1	37.4
18:00	34.2	29.9	30.9	31.1	29.2	26.2	28.9	25.2	39.7	35.8	41.8	36.6
19:00	33.2	31.8	33.4	32.1	30.1	25.6	28.7	26.7	44.5	35.2	42.3	35.5
20:00	31.1	32.2	33.7	38.6	32.7	26.8	29.5	30.0	46.8	32.0	40.0	33.1
21:00	31.8	29.5	30.3	42.2	34.8	28.9	32.3	29.5	43.4	28.6	35.5	31.7
22:00	27.7	28.0	28.3	40.3	35.7	29.8	34.2	28.7	38.3	28.0	31.1	29.5
23:00	26.1	27.5	26.3	38.5	33.6	27.7	31.7	26.4	34.2	25.2	28.2	27.2

St Chads 2021 Kerbside Lat 52.486067 Long -1.8967703 (range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	36.2	29.8	31.8	38.2	32.8	23.7	27.3	22.8	35.6	28.7	33.8	38.7
01:00	30.0	25.8	25.4	31.0	26.1	19.0	23.0	18.6	31.1	23.5	27.3	32.9
02:00	24.6	23.5	22.6	27.7	22.0	15.8	19.1	15.2	27.9	19.7	22.0	26.8
03:00	23.0	22.7	22.4	28.3	19.7	14.4	18.4	14.2	26.7	18.6	19.0	22.6
04:00	21.0	22.6	22.5	30.1	20.8	14.7	18.1	14.8	26.3	18.6	18.4	22.1
05:00	21.3	23.4	27.6	37.9	26.0	20.6	22.5	18.3	29.2	23.7	19.7	22.0
06:00	26.5	29.8	35.4	51.4	37.4	27.3	30.0	25.6	41.2	34.7	23.7	26.3
07:00	36.1	43.3	49.6	60.3	45.0	33.6	36.9	33.3	57.2	47.8	33.5	36.3
08:00	45.8	57.3	58.8	60.1	45.4	34.2	38.8	33.1	62.5	53.7	43.2	45.8
09:00	48.4	56.2	56.2	54.6	43.9	33.9	39.1	31.5	62.3	53.2	48.5	51.9
10:00	47.6	51.8	51.5	50.6	42.4	32.8	38.7	32.2	56.6	50.1	48.3	51.2
11:00	45.3	47.8	49.6	47.5	42.8	35.1	41.5	33.8	55.2	52.0	45.3	52.8
12:00	46.1	46.5	49.7	48.3	44.4	34.6	40.1	35.2	55.6	52.0	43.6	53.6
13:00	47.4	46.1	48.7	49.7	43.8	34.1	42.7	36.5	55.7	53.4	43.2	54.6
14:00	47.8	47.0	49.3	49.1	45.1	35.2	44.5	40.1	56.4	54.6	45.0	55.5
15:00	47.1	47.6	50.4	51.3	46.1	37.8	46.6	39.6	59.7	56.0	46.6	58.7
16:00	54.0	50.8	56.5	52.2	47.0	37.3	45.3	39.7	62.2	61.0	50.6	62.3
17:00	53.9	51.9	55.4	49.9	45.9	35.3	42.1	38.3	62.9	60.0	55.9	65.7
18:00	52.8	54.2	56.1	50.2	46.8	36.2	41.1	36.9	59.0	58.3	54.4	61.5
19:00	48.8	50.6	55.2	49.7	42.6	34.4	36.7	35.8	58.2	54.9	52.1	56.8
20:00	44.5	47.6	50.2	51.0	45.7	35.0	35.4	35.8	61.6	51.2	47.1	52.4
21:00	41.5	43.4	44.4	50.8	45.3	33.2	34.2	33.9	56.3	44.5	43.3	49.9
22:00	39.3	38.1	39.0	49.5	42.8	31.5	35.9	31.8	52.1	43.6	39.4	44.6
23:00	36.9	34.4	35.7	45.3	38.3	29.2	33.8	28.9	46.5	37.7	34.7	41.5

A4540 2021 Roadside Lat 52.476094 Long -1.8749891 (range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	32.4	32.0	29.5	38.1	37.2	27.3	27.9	26.4	30.0	27.2	32.8	28.0
01:00	28.2	28.8	26.8	35.9	30.9	20.8	24.6	20.8	27.4	20.9	29.4	26.6
02:00	22.4	22.8	24.0	33.3	26.5	16.8	20.1	17.0	23.7	16.6	22.6	22.0
03:00	20.6	21.2	22.7	30.1	22.9	15.2	18.9	14.9	20.4	14.5	19.1	19.7
04:00	20.4	19.2	23.7	32.6	23.5	20.4	20.6	16.5	21.6	17.8	18.3	19.3
05:00	24.4	22.9	29.3	37.3	31.5	25.9	26.4	23.0	28.0	26.3	21.8	21.4
06:00	30.8	29.2	35.4	45.0	36.2	28.5	27.7	25.9	34.2	32.0	30.8	27.3
07:00	37.6	36.3	40.7	47.2	35.7	26.7	28.1	27.4	40.4	36.8	41.3	31.1
08:00	41.8	45.0	45.5	39.1	32.2	25.4	27.9	23.6	40.3	38.0	44.0	34.5
09:00	46.1	44.6	43.5	33.0	30.3	24.5	25.9	20.3	36.7	36.0	48.0	38.5
10:00	42.2	43.2	37.2	26.1	29.4	22.9	24.3	19.7	30.7	32.7	47.5	36.9
11:00	41.2	38.5	34.9	23.9	28.3	23.4	26.1	20.2	28.4	30.2	42.2	35.3
12:00	37.8	33.5	29.6	23.5	28.2	21.8	24.7	20.5	27.6	27.8	36.4	34.3
13:00	36.1	33.4	29.1	21.1	28.4	22.8	24.8	23.1	29.0	28.9	36.3	32.9
14:00	37.5	31.8	28.6	20.5	29.8	21.9	27.0	22.0	27.9	30.7	36.0	35.2
15:00	37.8	30.6	30.3	21.9	29.3	22.9	25.1	23.5	29.4	32.1	39.8	38.5
16:00	41.8	32.6	28.8	23.1	32.1	24.6	27.3	23.5	30.1	36.8	45.2	41.1
17:00	45.7	37.6	31.6	22.7	32.8	23.2	27.2	25.2	31.6	43.0	51.9	43.8
18:00	47.7	41.5	35.7	24.5	31.1	24.0	26.7	23.5	35.2	43.9	51.5	43.9
19:00	44.6	45.0	38.6	28.5	31.4	25.5	30.3	26.2	41.1	45.8	51.2	40.2
20:00	42.1	41.5	41.5	32.0	37.1	26.3	31.1	28.8	46.8	41.7	47.8	40.2
21:00	38.9	40.9	40.3	37.6	39.1	31.5	32.3	30.4	43.7	36.7	45.1	40.6
22:00	36.7	38.1	36.8	42.7	44.6	33.1	37.1	31.0	38.9	35.7	39.6	35.2
23:00	34.4	37.3	33.8	41.8	43.0	32.5	33.6	29.5	34.2	31.3	35.0	30.7

Moor Street 2021 Roadside Lat 52.479895 Long -1.8919552 (range set at 30-40)

Hour	January	February	March	April	May	June	July	August	September	October	November	December
00:00	28.1	28.9	27.5	34.6	28.6	23.6	23.3		32.5	28.8	34.0	33.4
01:00	26.3	25.5	24.8	29.5	28.6	18.9	21.8		29.6	26.4	30.8	30.5
02:00	22.7	27.6	22.9	28.8	25.8	15.2	17.8		27.4	24.7	22.2	25.9
03:00	20.3	25.6	22.1	28.6	26.1	15.1	14.8		23.3	23.9	20.8	24.3
04:00	22.2	27.1	22.7	31.4	24.0	17.7	16.8		24.9	27.7	20.0	23.0
05:00	21.7	28.7	27.4	38.8	29.1	24.4	22.7		29.4	30.8	22.6	24.9
06:00	25.8	29.4	33.9	46.1	35.2	27.0	28.6		36.5	36.9	30.7	31.8
07:00	29.7	33.3	39.6	48.8	36.4	30.1	28.3		40.3	39.4	41.5	38.0
08:00	38.6	42.0	43.9	43.8	34.4	29.7	27.4		41.5	42.4	48.6	39.2
09:00	42.3	45.0	41.2	37.7	32.8	27.8	20.8		36.2	38.3	49.4	42.9
10:00	40.4	42.2	37.3	31.0	30.3	27.0	19.7		28.8	32.1	49.4	43.3
11:00	34.1	38.2	33.5	28.0	29.1	26.4	20.7		30.1	31.0	41.2	41.5
12:00	36.0	34.1	30.5	26.7	28.5	24.6	20.9		27.6	29.2	39.1	39.7
13:00	31.2	30.5	28.6	26.4	28.4	25.7	20.0		27.6	29.2	38.5	37.7
14:00	34.4	31.6	28.6	26.8	29.0	25.4	20.6		27.1	29.7	39.1	39.0
15:00	31.5	30.0	30.4	27.7	29.3	26.9	19.9		26.8	31.5	40.6	40.6
16:00	36.1	32.8	30.6	31.0	31.0	27.0	20.5		31.3	34.1	45.0	45.9
17:00	43.6	36.1	34.3	30.1	32.5	27.5	20.3		35.2	40.8	51.9	49.5
18:00	46.5	40.1	36.8	30.0	31.6	28.2	24.3		40.5	44.0	54.1	48.7
19:00	39.9	40.8	39.7	31.3	27.7	26.7	20.9		44.0	44.1	54.3	45.0
20:00	36.3	37.8	38.6	40.2	34.9	28.1	22.3		45.8	37.9	49.4	41.9
21:00	33.8	36.3	37.4	42.1	37.9	31.7	21.7		44.4	35.5	44.8	39.2
22:00	30.7	35.3	33.1	44.5	38.0	29.1	22.2		40.6	35.7	40.1	36.8
23:00	29.5	32.4	30.5	41.9	35.5	28.5	24.4		39.4	33.3	36.3	33.7

BRUM BREATHES

Birmingham's journey to create a clean air city

16 MARCH 2022



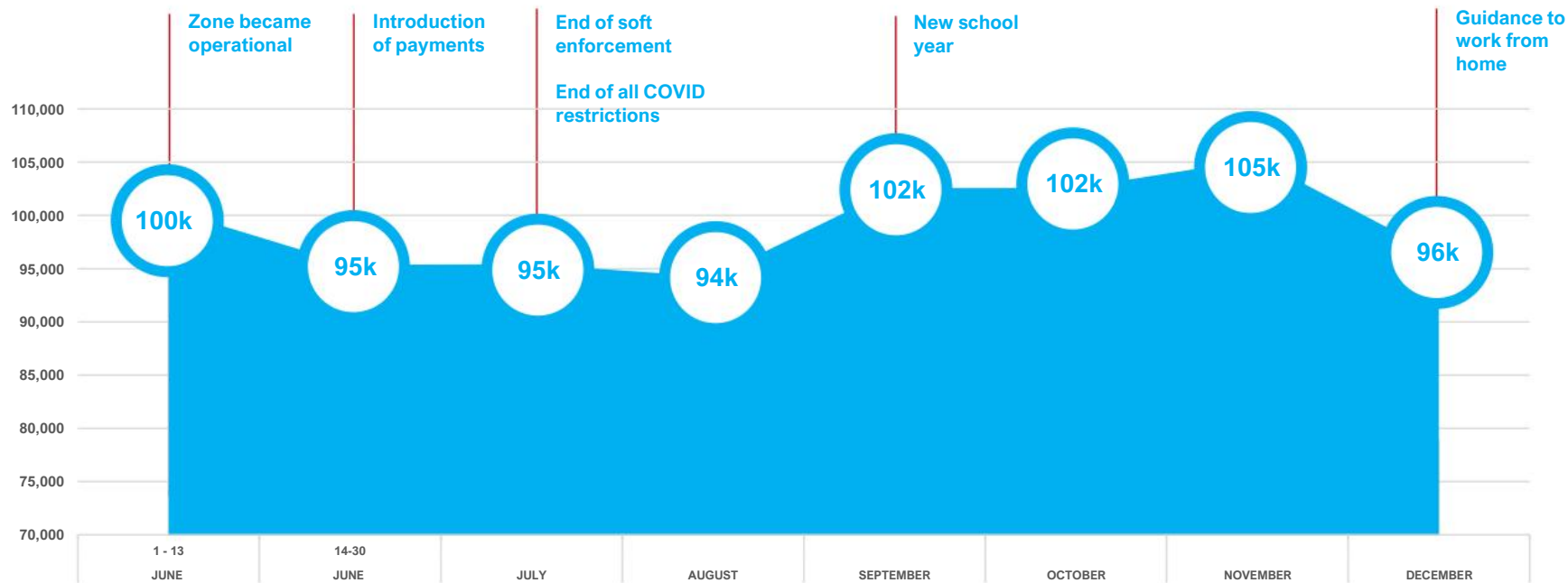
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Is the Clean Air Zone creating the desired change?

DAILY AVERAGE VOLUME OF UNIQUE VEHICLES

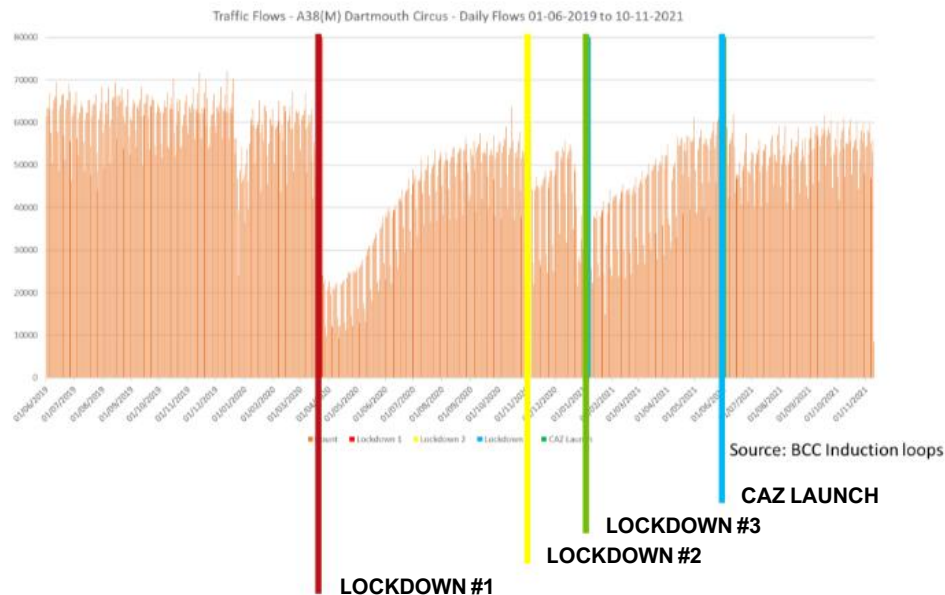


SOURCE: CAZ monthly factsheets June – December 2021 (brumbreathes.co.uk)

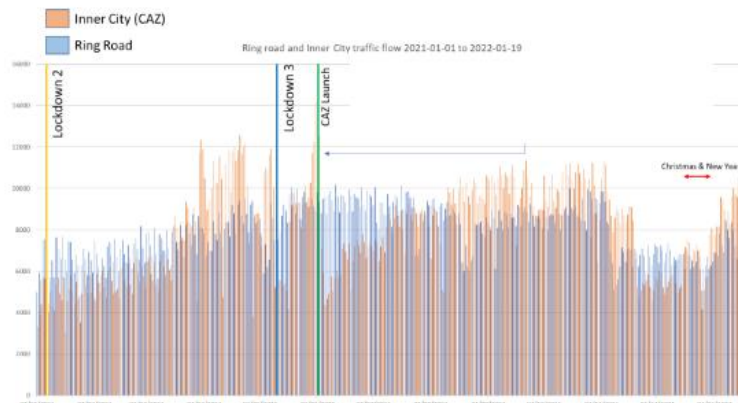
Is the Clean Air Zone creating the desired change?

ALL TRAFFIC

DAILY TRAFFIC FLOWS (A38M)



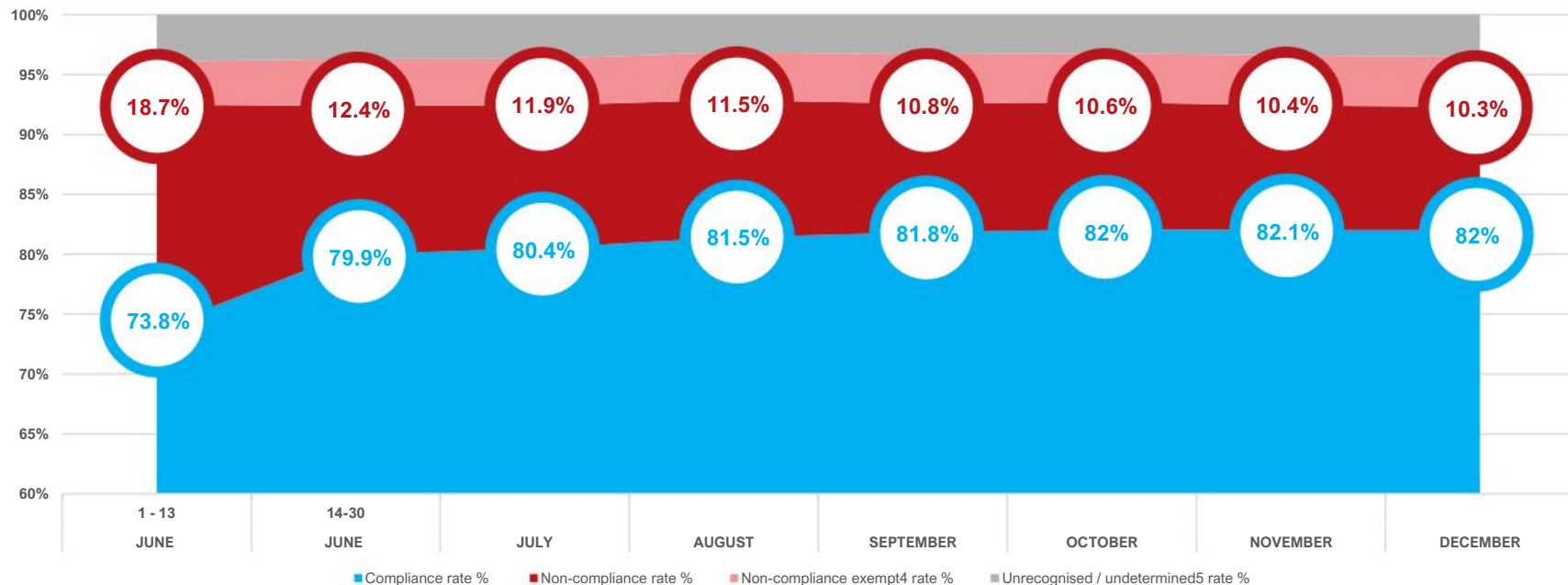
DAILY TRAFFIC FLOWS (A38M AND RING ROAD)



When the CAZ launched there was a reduction in the volume of traffic in the inner city, but there was no corresponding increase on the ring road. At the same time immediately prior to the launch of the scheme inner city traffic appears to have been elevated.

Is the Clean Air Zone creating the desired change?

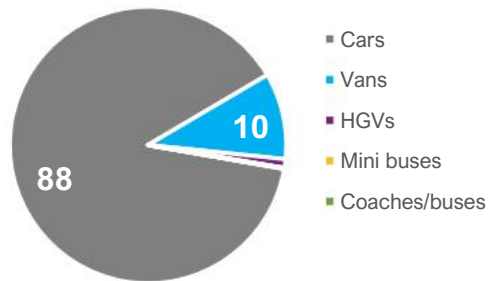
THE PERCENTAGE OF COMPLIANT v NON COMPLIANT VEHICLES (DAILY AVG)



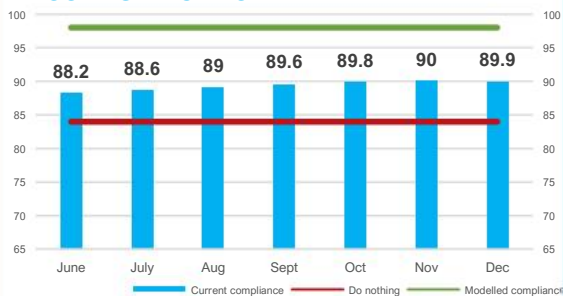
SOURCE: CAZ monthly factsheets June – December 2021 (brumbreathes.co.uk)

Is the Clean Air Zone creating the desired change?

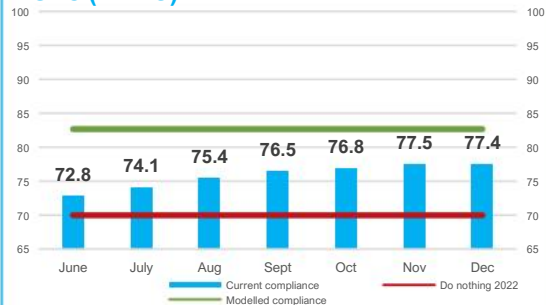
COMPOSITION OF THE FLEET



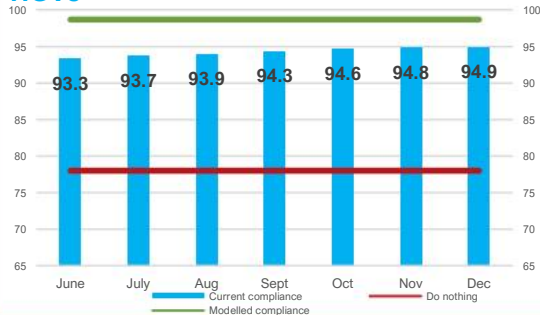
PASSENGER CARS



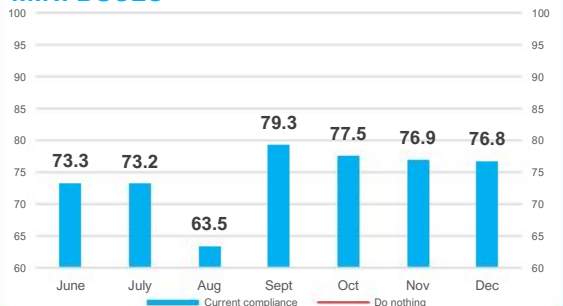
LGVs (VANS)



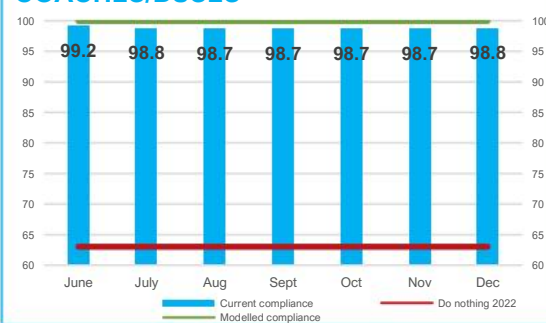
HGVs



MINI BUSES



COACHES/BUSES

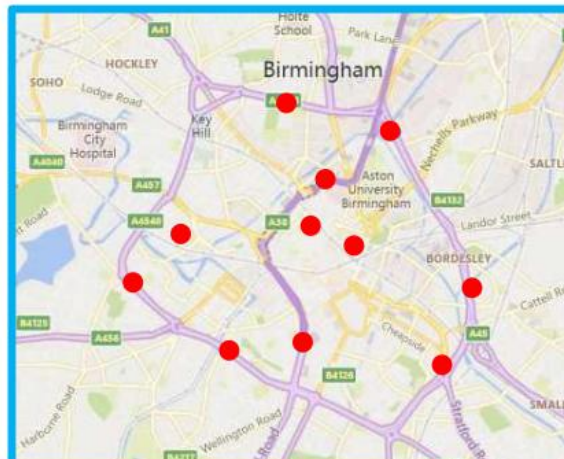


Our journey to becoming a clean air city

THE CITY HAS A LARGE NETWORK OF MONITORING EQUIPMENT ACROSS THE CITY CENTRE AND RING ROAD.



60+ DIFFUSION TUBES



12 AUTOMATIC ANALYSERS



15 INDICATIVE SENSORS

WWW.BIRMINGHAMAIRQUALITY.CO.UK

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Is the Clean Air Zone creating the desired change?

CHANGES TO THE FLEET

	JUNE 2021	DECEMBER 2021
	RATES OF COMPLIANCE	
ALL UNIQUE VEHICLES	79.8%	88.8%
PASSENGER CARS	81.8%	89.9%
LGVs (VANs)	63.3%	77.4%

REDUCTIONS TO THE LEVELS OF NO2

	2019 to 2021
CLEAN AIR ZONE	-13%
RING ROAD	-14%
WIDER CITY	-13%

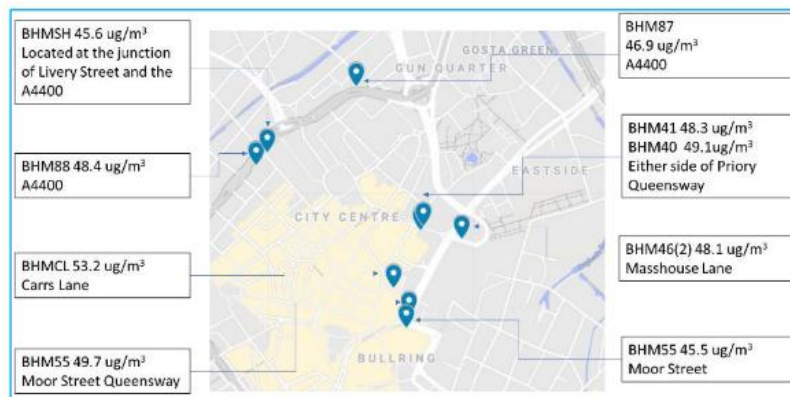
NOTE: Represents average change in recorded levels of NO2 from diffusion tubes. The readings for 2021 are based on six months' data.

Is the Clean Air Zone creating the desired change?

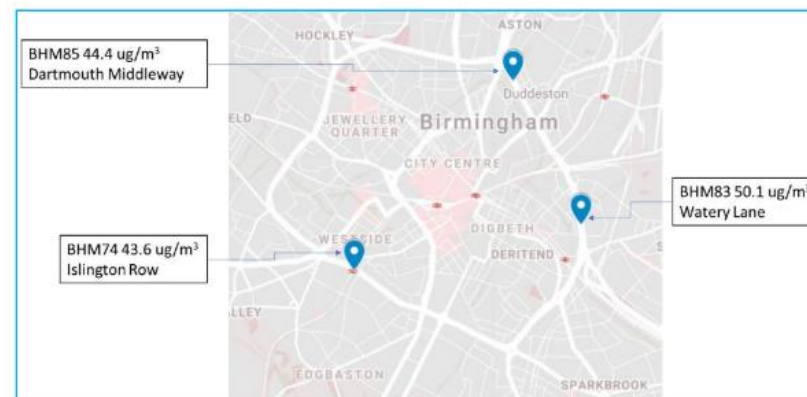
TRACKING CHANGES IN THE LEVELS OF NITROGEN DIOXIDE

	2016 to 2021	2019 to 2020	2019 to 2021	2020 to 2021
CLEAN AIR ZONE	-42%	-15%	-13%	2%
RING ROAD	NO DATA	-17%	-14%	4%
WIDER CITY	-38%	-16%	-13%	3%

LOCATIONS IN THE CAZ WITH EXCEEDANCES



LOCATIONS ON THE RING ROAD WITH EXCEEDANCES





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Flood Risk Management Scrutiny Report 2022



Honorary Alderman Tony Kennedy
16th March 2022



Scrutiny Report

- Climate Emergency
- LLFA Roles / Responsibilities
- Local Flood Risk Management Strategy
- Strategic Flood Risk Management Board / Birmingham Water Group meetings
- First Avenue Weir Removals, River Rea, Selly Park North
- Hilltop Brook, Handsworth
- Periera Rd Allotments, Harborne
- Selly Park North & Selly Park South Flood Risk Management Schemes
- Upper Bourn Brook and Lower Rea
- Environment Agency Schemes – Current
- Consenting Works on Ordinary Watercourses
- Works Funded by Flood Risk Management Revenue Budget
- Works provided for other BCC Departments
- Reservoir Works provided for BCC Leisure Services
- Statutory Consultee Role for Planning
- Flood Risk Management Audit
- Summing up

Climate Emergency

- On 11th June 2019, Birmingham City Council announced a climate emergency and made the commitment to reduce the city's carbon emissions, with an aspiration to become net zero carbon by 2030.
- The impact of climate change or changing weather patterns will not just be felt afar, and the impact on Birmingham residents of increased extreme weather events, including flooding, droughts and heatwave is likely to be profound, with increasing risks to both life and property.

LLFA Roles / Responsibilities

- LLFA as Statutory consultee for Planning / Surface water
- Attracting external grants such as Grant in Aid & Local Levy
- Flood alleviation and ongoing pipeline of schemes,
- Flood incident response and out of hours rota duty
- Partnership works with Environment Agency, Landscape Practice Group and Trent Rivers Trust
- Emergency works / works in the interest of Health and Safety for 11 BCC Reservoirs
- Reservoir Works and Plans
- Determine Consents under s23 of Land Drainage Act



Local Flood Risk Management Strategy

The BCC strategy update has been postponed due to the Environment Agency's National Strategy, 2021 guidance from the Local Government Association and recent consultations on the Flood Risk Management Plans (FRMPs) and River Basin Management Plans (RBMPs).

It will also include recent changes to the climate change allowances and will be supported by an updated Habitats Regulation Assessment and Strategic Environmental Assessment, in light of DEFRA and Natural England advice.



Strategic Board & Birmingham Water Group meetings

- Partnership approach and regular meetings involving Birmingham City Council, Environment Agency, Severn Trent Water and Kier
- 27 projects put forward in the new 6 year pipeline – areas targeted on a risk based approach, with best chances of attracting funding
- The pipeline is anticipating to better protect approx. 700 residential and commercial properties over 6 years
- The programme is currently valued at £5m, subject to business cases being submitted to the Environment Agency.

First Avenue Weir Removals, River Rea, Selly Park North



- Work delivered by BCC Flood Risk Contractors / BCC FRM team on behalf of the Environment Agency
- Two complete weir removals and two partial removals
- Re-naturalisation of the channel and use of gravels
- Haybales used to capture silt
- BCC site supervision
- Will lower water levels and refurnish the Rea with additional capacity
- Decrease flood risk
- Improve fish passage and improve habitats

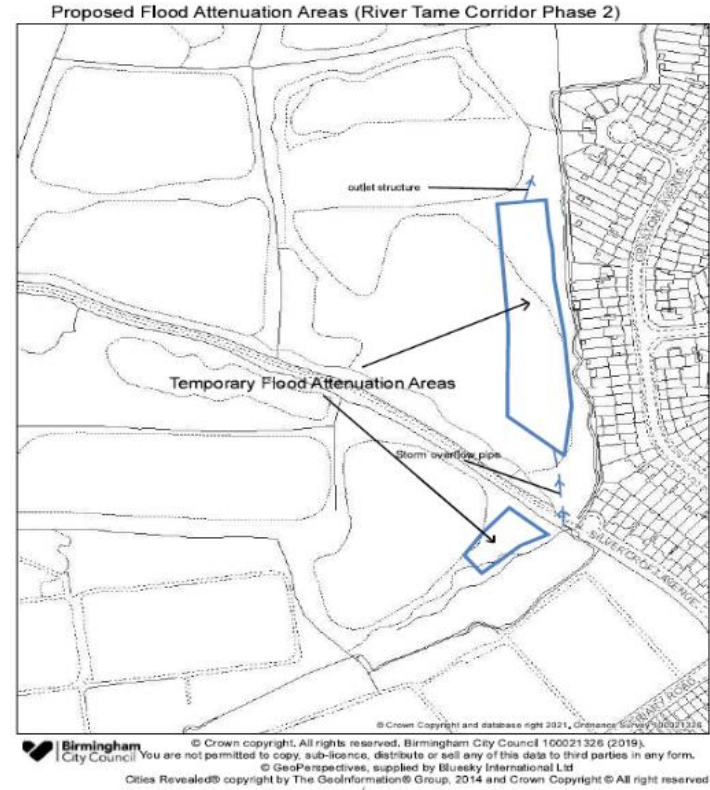
Hilltop Brook, Handsworth Wood

Breakout and rebuild existing wing walls and installation of two bends with concrete surround to form new inlet structure.

Fabricate and install new raking trash screen to new inlet structure.

Install non- return flap valve to existing outfall and construction of a new brick flood wall and water tightening measures to existing concrete panels at Sunningdale Close

Next stage: Shallow excavation of existing ground to form large natural earth depressions to act as a storage areas adjacent to the existing watercourse.



Periera Rd Allotments, Harborne

- Stabilised existing eroded sections using large boulder stones. Clear channel of major blockages
- Excavated channel to restore channel capacity
- Structural survey to culvert and repair fractures/cracks to existing brick culvert. Replace missing defective brickwork.
- Carry out localised underpinning works to eroded section of culvert and new bridge.



Selly Park North and South Schemes - Complete



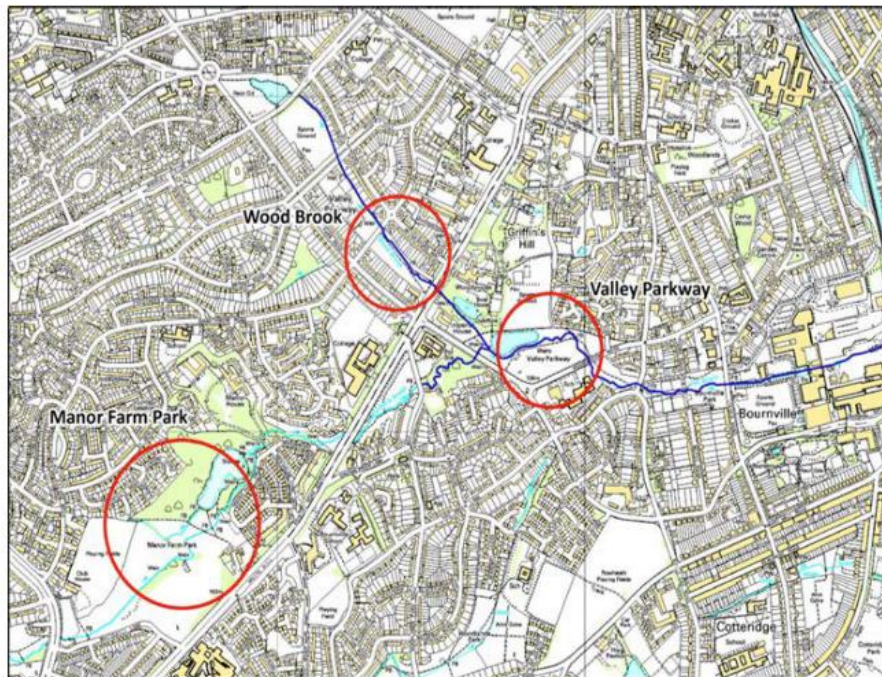
Upper Bourn Brook and Lower Rea



Environment
Agency



Birmingham
City Council



- **Upper Bourn Brook Study**

The Environment Agency, Severn Trent Water and Birmingham City Council are working together on a catchment wide study to understand the flood risk and develop flood mitigation options for the upper Bourn Brook catchment.

- **Lower Rea and The Bourn**

The Environment Agency are continuing to working on a catchment wide study to understand the flood risk and develop flood mitigation options for the Bourn and Lower Rea catchment. Currently at Strategic Outline Case development stage (funded by Government Grant in Aid) to find a preferred way forward and viable scheme.



Birmingham
City Council

Environment Agency Schemes - Current



Perry Barr and Witton flood risk management scheme

1,400 properties at risk from this section of the River Tame, including 950 residential properties. Construction work at the Sandwell Valley will increase flood storage capacity. Birmingham City Council made a contribution of £600k to this scheme in early 2019.



Bromford and Castle Vale flood risk management scheme

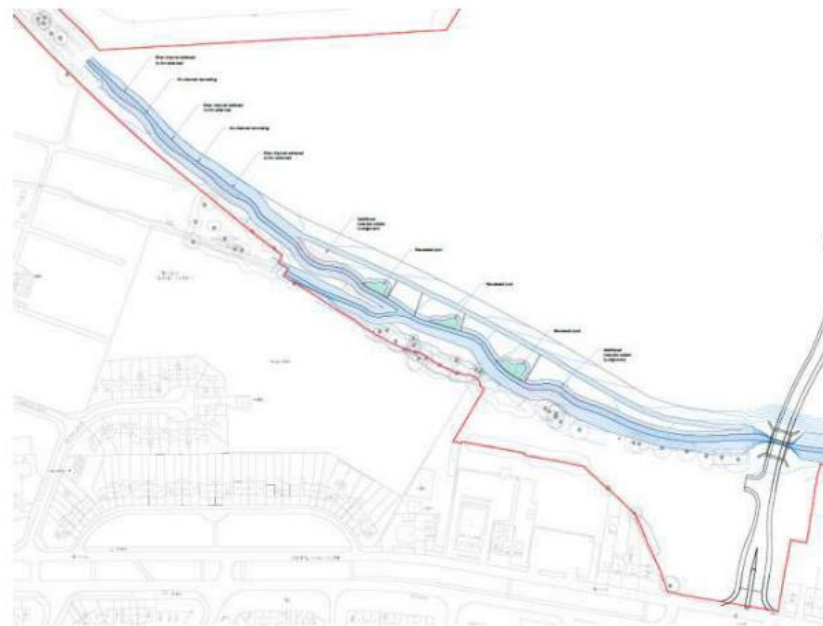
This scheme will better protect more than 900 homes and businesses from flooding and has attracted a sizeable contribution from Homes England. The scheme involves raising flood walls and constructing new ones and earth embankments, . A cycling route will be provided along the south bank linking up with the existing networks at Bromford Road and Chester Road. Ongoing delays means slippage for the scheme.



Consenting Works on Ordinary Watercourses

Birmingham City Council as Lead Local Flood Authority is responsible for regulating activities on ordinary watercourses in Birmingham and legally responsible for determining s23 Land Drainage Act 1991 consents.

In 2021, fifteen applications were received, plus advising on internal works and HS2 crossings / exempt activities.



Works Funded by Flood Risk Management Revenue Budget

Restoring flood channel/culvert capacity by excavation, cutting back vegetation and removing major blockages:

- **River Cole** - Formans Road to Nethercote Gardens
- **Plants Brook** - Ebrook Road to Eachelhurst Road
- **Turves Green Brook & Tributary to Bourn Brook** - Kingswood Road to Turves Green & Arosa Drive to Beaumont Drive
- **City Wide** - Flood Asset Maintenance works to all strategic grills
- **Handsworth Wood Brook** – Oxhill Rd to Sunningdale Close
- **Inspecting strategic culvert structures.**



Works for other BCC Teams and Departments

- **Local Planning Authority:** Sustainable Drainage, LLFA Consultee role, permeability / suitability checks
- **Housing:** Fisher Close and Merrits Brook
- **Bereavement:** Handsworth Cemetery

Leisure:

- Alexander Stadium,
- Wyndley Leisure Centre
- Ward End Pool
- Geranium Close
- Tennal Lane Allotments brook
- Rose Hill
- Valley Parkway Pool
- Manor Farm Pool
- Handsworth Park Pool

Highways

- Selly Park North
- Section 38 agreements / Highway Improvement Schemes.
- Working on highway surface water problems and flooding issues
- Plants Brook – Upper Holland Rd

Reservoir Works provided for BCC Leisure Services

Reservoir Act 1975 Section 10 and 12 - Inspections City Wide.
On Site Emergency Plans for each of the 11 Large Raised Reservoirs.

Lifford Reservoir, Kings Norton – Work on site to repair erosion to crest, maintenance work to dam in preparation of Section 12 inspection.

Longmoor Reservoir, Sutton Coldfield – Repair to main scour penstock to prevent leakage. Fitting of anti vandal device to prevent unauthorised operation.

Perry Reservoir – Section 10 inspection work, CCTV Survey of pipework, replacement of inspection chamber covers and repairs

Powells Reservoir, Sutton Park – Repairs to brick and concrete spillway slabs and works to restore structural integrity.

Salford Reservoir, Aston – Penstock refurbishment to allow free operation of spindle.

Swanshurst Reservoir, Springfield – Flood study, CCTV Survey, repair work to the auxiliary spillway.

Wyndley Reservoir, Sutton Coldfield – Topographical survey of the dam, construction of a reinforced concrete apron and repairs.



Statutory Consultee Role for Planning

The statutory consultee role ensures that proposed developments and surface water drainage schemes are future-proofed in line with the National Planning Policy Framework (NPPF), with appropriate climate change allowances and conforms to the Council's planning policies, Birmingham Development Plan, Big City Plan, and other planning documents.

Year	Total No. of Applications	Major Planning Applications	Pre-App/General Enquiries	Discharge of Condition
2017	405	185	94	126
2018	392	140	83	169
2019	577	274	59	322
2020	613	285	32	210
2021				

Flood Risk Management Audit

- Co-ordination and monitoring arrangements established for flood management within the Directorate and across the Council as appropriate;
- Partnership working arrangements established with all relevant Risk Management Authorities and relevant external organisations;
- Arrangements for ensuring a Local Flood Risk Management Strategy for Birmingham has been established and is being kept up to date;
- Systems established to identify and prioritise any maintenance or improvement works required on the Council's watercourses.

No major concerns or issues were found by virtue of the audit and the team received recommendations on how to further improve the service, given the incredibly varied nature and enormous volume of our work

Summing Up

Thank-you for your time today

Are there any questions or queries?



Flood Risk Management Annual Report

Report of the Assistant Director Highways and Infrastructure - March 2022

1. Introduction

A scrutiny review of Flood Risk Management (FRM) and Response was published in June 2010. This set out 12 recommendations which were completed in 2010. The Flood and Water Management Act 2010 passed into law conveying new responsibilities and making Birmingham City Council a Lead Local Flood Authority (LLFA). This report highlights progress in addressing these statutory responsibilities and provides an update on other flood risk management related issues.

This report also provides an update into areas for improvement identified in the review of the May 2018 flooding conducted by members of the Sustainability & Transport O&S Committee on 19th July 2018. No major issues were raised at the submittal of the last Flood Risk Management Report in March 2021.

1.1 Climate Emergency

On 11th June 2019, Birmingham City Council (BCC) announced a climate emergency and made the commitment to reduce the city's carbon emissions and limit Birmingham's contribution to climate change, with an aspiration to become net zero carbon by 2030. The impact of climate change will not just be felt afar, and the impact on Birmingham residents of increased extreme weather events, including flooding, droughts and heatwave is likely to be profound, with increasing risks to both life and property. Given our global footprint and the diversity of the city, the climate crisis will hit at the heart of families and communities within the city.

The Flood Risk Management team is mindful of the changes and impacts upon infrastructure, people and places and works with our local contractors and PFI partner to pre-emptively clear and monitor high risk structures and assets which have a significant effect on flood risk.

We are working with communities, our Private Finance Initiative (PFI) partner and local Flood Action Groups to provide sandbags, provide cyclical maintenance to high risk structures and additional clearing of gullies and trash screens in advance of a storm or flood event to proactively decrease the impact of surface water flooding across our area. Some areas are more challenging than others and require community buy-in and co-operation to access busy roads and to cleanse gullies on residential streets.

The Flood Risk Management team also monitor weather alerts and are pro-active in terms of responding to flood alerts and flood warnings. The team also provide an out of hours rota / service during evenings and weekends. Names and numbers of the appropriate staff are shared with the Control Room and this works as a contact for elected members, other teams and other parts of the Council to good effect for heavy rainfall or flood events. The team, when health and safety / resources allow, also actively monitor flood levels on-site or via cameras and online level gauges and work alongside other organisations to ensure a multi-agency led approach and co-operation with partner organisations such as the emergency services, the Environment Agency and Severn Trent Water.

1.2 COVID-19 Contingency and Hybrid Working

In light of the COVID-19 pandemic and COVID recovery stage, the Flood Risk Management Team have increased team resilience by being able to work in an agile and hybrid fashion, to enable the team to work remotely, whilst also meeting in an office or site environment. The team and our Flood Risk Contractors have delivered essential works and continued to deliver schemes and drainage works during the pandemic for BCC Leisure, Bereavement and Housing teams and also for external partners such as the Environment Agency. All members of the team are able to fulfil their roles in case of flood events. There is added contingency in case of a flood event, and the team are able to double-staff the out of hours rota to provide essential cover, when required, for events such as Storm Dudley and Storm Eunice. The Resilience Team are also working with wider teams to ensure that the Council is prepared and have contingency for vulnerable and 'at risk' people during this period.

A Flood Risk representative has been involved in the Environment Cell and the COVID Recovery Group (CRG) to help inform COVID related environmental issues and to take part in the Environment Cell decision-making process. This involvement has meant close collaboration with other teams from Inclusive Growth / City Operations, Neighbourhoods and our PFI partner - Kier and this close working resulted in a good response to heavy rainfall and minor flood events. The Environment Cell structure allowed for out-of-hours communication and requests to other teams such as Neighbourhood Street Cleansing and Waste Management for help and assistance, post flood and heavy rainfall events.

2. Flood and Water Management Act Duties

The following work has been undertaken to fulfil the Lead Local Flood Authority duties under the Flood and Water Management Act.

2.1 Local Flood Risk Management Strategy

The [Local Flood Risk Management Strategy](#), October 2017, which states the strategic direction for the management of flood risk across Birmingham is being updated for 2022, to reflect recent flood events, future pipeline of schemes and states our intent to work with partners to address, manage and mitigate against flood risk. The Local Flood Risk Management Strategy update was postponed due to the publication of the Environment Agency's [National Strategy](#) (published September 2020), new 2021 guidance from the Local Government Association and also due to the recent consultations on the [Flood Risk Management Plans](#) (FRMPs) and [River Basin Management Plans](#) (RBMPs). It will also include changes to the [climate change allowances](#) and will be supported by an updated Habitats Regulation Assessment and Strategic Environmental Assessment, in light of DEFRA and Natural England advice.

The Environment Agency strategy has a long-term vision is for: a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100. It has 3 long-term ambitions, underpinned by evidence about future risk and investment needs. They are:

- **Climate resilient places:** working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change
- **Today's growth and infrastructure resilient in tomorrow's climate:** making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change
- **A nation ready to respond and adapt to flooding and coastal change:** ensuring local people understand their risk to flooding and coastal change, and know their responsibilities and how to take action.

By continuing and strengthening collaborative working arrangements to improve flood risk management, Birmingham City Council as Lead Local Flood Authority can deliver more schemes / drainage improvements and share best available data and good practice, supported by partners and other risk management authorities.

2.2 Cooperation with other Flood Risk Management Authorities

The Lead Local Flood Authority continues to cooperate extensively with other risk management authorities (RMAs) at various levels as established in the 3-tiered flood risk management governance structure. The BCC Flood Risk team also attend neighbouring Councils' partnership meetings and Environment Agency LLFA Networking groups whilst having representation on the Trent Regional Flood and Coastal Committee (RFCC), the Trent RFCC Financial Sub Committee (RFCC FSC) and the CIWEM West Midlands Committee.

2.2.1 Strategic Flood Risk Management Board

The Strategic Board last met in January 2022 and was well attended by members of the Flood Risk Management Team, Assistant Director of Highways, Severn Trent Water, the Environment Agency and Honorary Alderman Tony Kennedy. The Strategic Board meets twice yearly and will meet again in Summer 2022. The Strategic Board acts as the focus and political driver for partnership activity and allows for updates and progress from partners. No major issues were escalated to the Strategic Board from either the Birmingham Water Group or other risk management authorities.

2.2.2 Birmingham Water Group

The Birmingham Water Group met twice in June and November 2021 and recognised that good progress was being made with the s19 Action Tracker locations. Partners agreed that further work is required to decide which priority locations are to be collectively focused on, in line with the new Severn Trent Water Asset Management Plan (AMP7), Birmingham City Council and Environment Agency priorities. The Birmingham Water Group is the officer led partnership working to deliver flood risk management improvements across the City, and has representation from the Flood Risk Management Team, Severn Trent Water, Kier and the Environment Agency.

2.2.3 Project Groups

The Lead Local Flood Authority has worked with partners on a number of projects as follows:

River Rea Partnership

The Rea Catchment Partnership, led by the Environment Agency has over the past few years completed construction of two flood risk management schemes in the City:

- **Selly Park North Flood Risk Management Scheme**

The Selly Park North flood risk management scheme is fully operational and the Environment Agency has worked in partnership with Calthorpe Estates, Birmingham City Council and other organisations to help reduce the risk of flooding.

The area of Selly Park North has a history of flooding from the Bourn Brook severely affecting the area in 2008 and more recently in June 2016. The scheme reduces flood risk to 150 properties in the area. The scheme involved deepening and widening an existing flood water storage area near the Bourn Brook Walkway on Harborne Lane, Harborne. This increased the capacity of the storage area and offered wildlife and ecology improvements. Flow improvement works were also carried out at the Pebble Mill development site creating an overland flow route to direct flows into a new bypass culvert running underneath the Pershore Road. This has reduced the risk of fluvial flood water getting onto the highway and into properties. The Environment Agency, Severn Trent Water and Birmingham City Council are continuing to look at the residual risk of surface water flooding for additional surface water improvements in this area whilst working with the Local Flood Action Group.

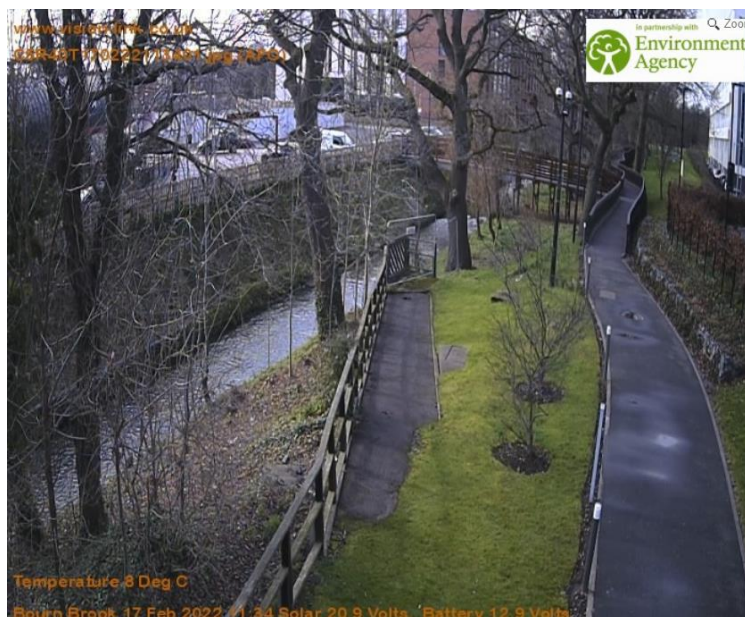


Image taken from <https://portal.vision-link.co.uk/bournbrook.php> showing the Bourn Brook

- **Selly Park South Flood Risk Management Scheme**

Construction has completed on the Environment Agency's £2.4 million flood risk management scheme in Selly Park South. The Environment Agency worked in partnership with St Andrew's Healthcare, Birmingham City Council and other organisations to develop the Selly Park Flood Risk Management Scheme to help reduce the risk of flooding.

The area of Selly Park South has a history of flooding from the River Rea, most notably in 2008 when some residents were forced to move out of their homes as a result of flood damage. This scheme will help protect more than 200 properties in the area from fluvial flooding. The Environment Agency, Severn Trent Water and Birmingham City Council are looking at the residual risk of surface water flooding.

The scheme included the construction of an embankment on public open space, immediately upstream of Dogpool Lane bridge to help hold water during extreme heavy rainfall events. Bank levels were also raised downstream of the bridge to reduce the risk of flood water getting into properties.

The **River Rea Partnership** is also currently undertaking the following strategic study:

Upper Bourn Brook Study

The Environment Agency, Severn Trent Water and Birmingham City Council are working together on a catchment-wide study to understand the flood risk and develop flood mitigation options for the upper Bourn Brook catchment. The study covers the catchment upstream of Harborne Lane, Selly Oak, taking in Quinton, Woodgate, Bartley Green and Harborne. The study is at an early stage, initial modelling has been undertaken and high-level options are being investigated. Once this is complete the Environment Agency will prepare a Strategic Business Case on behalf of the partnership with a view to securing funding to further develop the options.

- **Lower Rea and The Bourn**

The Environment Agency is working on a catchment wide study to understand the flood risk and develop flood mitigation options for the Bourn and Lower Rea catchment. The Flood Risk Management Scheme, is currently at Strategic Outline Case development stage (funded by

Government Grant in Aid) to find a preferred way forward and viable scheme. This is likely to involve a series of flood storage areas on The Bourn and also potentially on the Lower Rea in Birmingham. The area has suffered extensive flooding in 2008, 2012 and 2016. We are currently working with partners, including West Midlands Combined Authority, Severn Trent Water and private businesses and developers to explore opportunities for delivery and funding contributions. This will help the project progress to Outline Business Case to develop the preferred option further and assuming funding can be found then on to Full Business Case and Construction.

The River Tame Flood Risk Management Strategy

The River Tame Flood Risk Management Strategy sets out the Environment Agency's strategic approach to flood risk management on the River Tame by considering opportunities to manage flood risk across a wide area, while providing environmental benefits. The Environment Agency is currently delivering two schemes under this strategy.

- **Perry Barr and Witton Flood Risk Management Scheme**

A key part of the River Tame Strategy is the implementation of the Perry Barr and Witton flood risk management scheme, which is to be delivered over 2 phases, at an approximate cost of £42 million for both phases of the scheme. There are approximately 1,400 properties at risk from this section of the River Tame, including 950 residential properties. Phase 1 of the scheme was completed in spring 2017, bringing new flood walls, flood gates and flow conveyance improvements from Brookvale Road in Witton down to Gravelly Park Industrial Estate in Aston. Improvement works to culverts under the railway line in this area are currently outstanding, but will be completed as part of Phase 2. The improved flood wall and flood gates in Witton successfully stopped properties from flooding in May 2018. Construction work for Phase 2 started in late January 2018. The work here will increase flood storage capacity in the Sandwell Valley and is expected to be operational by the end of 2022. Birmingham City Council has made a contribution of £600k to this scheme in early 2019.

The Environment Agency will continue with their programme of environmental works. This will improve the quality of existing habitats, including grasslands, hedgerows and woodland. They also plan to plant over 20,000 trees as part of the scheme and have recently commenced with the winter tree planting programme. This work has started just south of the compound on the land between forge lane and the cycle path. This scheme will reduce future flood risk along the River Tame by the construction of a 1.7 million cubic metre flood storage reservoir in the Sandwell Valley.



Aerial photo of the Perry Barr and Witton Flood Scheme construction site in the snow, taken January 2021. Photo courtesy of Andy Purcell.

Figure above showing % of long-term average flows in January 2021, showing exceptional high flows across the Trent, Don and Mersey catchments. Taken from the CEH Hydrological Summary, January 2021

Winter 2020/21 had the coldest mean temperature since 2010 and had exceptionally wet weather from Storm Christoph, followed by snow from Storm Darcy. It was wetter than average and mean river flows for January were above average across England. January was a wet month at the national scale (with 114% of the January average rainfall) and groundwater levels also increased to above average. Over 300 flood alerts were issued across England and Wales with approximately 675 properties experienced flooding across South Yorkshire, Cheshire, Greater Manchester and Lancashire.

The wet weather continued into February 2021 and rainfall totals were again above average for much of the UK, for the third consecutive month, particularly affecting central and southern Scotland, northern England, south Wales and Northern Ireland. As a whole, the UK received 118% of average rainfall, with areas of eastern England and Scotland registering more than 170%. March and April 2021 were largely dry and settled, interspersed with unsettled periods and river flows decreased to fall within normal range, with high flows noted in across catchments in north-west England. May 2021 had relative low temperatures and high rainfall, with successive westerly bands of rain leading to high flows in Wales and record-breaking monthly mean flows more than four times the average on the Conwy, Dee, Teifi, Twyi, Tawe and Cynon, The Severn-Trent catchment received 206% of average rainfall for this month.

June was largely dry, interspersed with thunderstorms and although North-West England recorded its driest June since 1941, this is contrasted with areas of southern England experiencing the second-wettest May and June on record. The M42 was flooded and roads were closed across Solihull. The changeable conditions continued into July, with heat warnings issued and also thunderstorms. Storm Evert at the end of July caused power outages and travel disruption which affected Birmingham, with the Control Room and the Flood Risk Management team receiving numerous calls from concerned residents regarding surface water flooding. Flooding was seen on the M5, there were also train cancellations at Birmingham New Street and Dorridge in Solihull was particularly impacted by flooding, with approximately 30 properties reporting internal flooding.

August was again unsettled and flood events were experienced in Belfast, Glasgow and the Isle of Wight and led into a dry September, interspersed with spells of rain and thundery showers. October saw repeated flooding in Cockermouth and the Lake District with the UK receiving 131% average rainfall and November brought Storm Arwen accompanied by a red weather warning. In this storm event, three people lost their lives, thousands of trees were felled, and it's estimated that hundreds of thousands of homes were left without power across northern England.

December 2021 was generally calm, with unseasonably warm temperatures (16.5°C recorded at Bala, Gwynedd) however Storm Barra hampered the recovery from Storm Arwen with further travel disruption, fallen trees and coastal flooding in Scotland, Northern Ireland and East Anglia. The UK as a whole received average December rainfall, although less than 70% of the average was registered in north-west Scotland (with less than 50% in the far north) and north-west and southern England. In contrast, parts of Wales, central and north-east England registered more than 130% of average rainfall.

The main storm events in 2021 that impacted Birmingham were noted as Storm Christoph in January, Storm Darcy in February and Storm Evert in July. All three storms led to reported incidences of surface water flooding, mainly affecting roads and highways. Lesser impacts were felt from Storm Arwen in November, Storm Barra in December and Storms Malik and Corrie in January 2022. However, between the 14th and 21st February 2022, Storms Dudley, Eunice and Franklin led to high winds and heavy rain, especially in the South-East with notable very high flows across the Severn catchment, after 150mm of rainfall across five days in upland Wales.

Rainfall intensity is expected to increase in the future. It's envisaged that surface water flooding will become more frequent with higher rainfall totals falling more often. River flows are also expected to increase leading to increased risk of fluvial flooding.

Flood Warnings and Flood Alerts

The Flood Risk Management Team have been working with the Hydrometry teams at the Environment Agency to locate areas which do not currently have a flood warning service in place and locations for level gauges and rain gauges to better inform the Flood Warning Direct (FWD) service that the Environment Agency offer. The locations agreed with the Environment Agency are on the Bourne Brook, Perry Brook and the Plants Brook in Sutton Coldfield and these gauges have now been installed to benefit the local communities with more accurate flood warning service.

28 flood warnings / flood alerts affecting the Birmingham area were issued on the Rivers Rea, Cole, and Middle / Upper Tame during 2021. These are issued in advance of expected fluvial (river) flooding and do not usually cover the risks of surface water (pluvial) and flooding of smaller watercourses, unless contained within the wider warning or alert area.

DATE	WARNING / ALERT AREA NAME	TYPE
20/01/2021	Middle Tame	Flood Alert
28/01/2021	River Cole	Flood Alert
29/01/2021	Middle Tame	Flood Alert
30/01/2021	River Cole	Flood Alert
31/01/2021	Middle Tame	Update Flood Alert
16/06/2021	River Cole	Flood Alert
16/06/2021	River Rea	Flood Alert
16/06/2021	Upper Tame	Flood Alert
18/06/2021	River Cole	Flood Alert
18/06/2021	River Rea	Flood Alert
18/06/2021	Upper Tame	Flood Alert
25/06/2021	River Rea	Flood Alert
25/06/2021	Upper Tame	Flood Alert
25/06/2021	River Cole	Flood Alert
02/07/2021	River Cole	Flood Alert
02/07/2021	River Rea	Flood Alert
02/07/2021	Upper Tame	Flood Alert
22/07/2021	River Cole	Flood Alert
22/07/2021	River Rea	Flood Alert
22/07/2021	Upper Tame	Flood Alert
27/07/2021	Upper Tame	Flood Alert
05/10/2021	River Cole	Flood Alert
05/10/2021	Upper Tame	Flood Alert
30/10/2021	River Cole	Flood Alert
31/10/2021	River Rea	Flood Alert
31/10/2021	Middle Tame	Flood Alert
31/10/2021	River Cole	Flood Alert
31/10/2021	Upper Tame	Flood Alert

The Upper Tame flood alert area covers 'low-lying land and roads between Horseley Heath and Castle Vale on the River Tame and Bescot on the Ford Brook'. Middle Tame covers 'low-lying land and roads between Water Orton and Tamworth including the Bourne Brook at Fazeley'. The River Rea alert area affects 'low-lying land and roads between Longbridge and Nechells' whilst the River

Cole alert area is for 'low-lying land and roads between Majors Green and Coleshill' on the River Cole.

The Flood Risk Management Team would encourage people and residents at risk of flooding to sign up for free Environment Agency's Flood Warnings and Flood Alert via the 'Floodline' service on telephone: 0345 988 1188; Textphone: 0345 602 6340 or [online](#).

July 2021 and Storm Evert

Wet and changeable conditions were seen in July, with both heat warnings and thunderstorms. Heavy rain particularly affected parts of Handsworth Wood and the Hilltop Brook burst its banks affecting a small number of properties. Blockages on strategic grill structures were cleaned in advance of the rainfall and Flood Risk contractors undertook blockage removal on watercourses to help allay the risk of flooding. Although heavy rain was forecast, no flood alerts were issued for the area prior to the storm and a Flood Alert for the River Tame was issued after the thunderstorm had passed. Storm Evert at the end of July then caused power outages and travel disruption. There were notifications of garden and highway flooding and the highway flooding dissipated once water levels in the sewer system went down. BCC Highways, Flood Risk Management team, Resilience and PFI partner worked closely in an attempt to ensure that the impact of flooding was managed effectively, and the risk to people and properties mitigated as far as reasonably practicable.

It should be noted that although Birmingham was not as adversely affected as other areas across Staffordshire, Solihull and the Black Country - if the rainfall experienced over Solihull were to have fallen in Birmingham, there would have been widespread flooding.

Flood Event s19 Investigations

In 2016 and 2018, a significant number of flooding incidents were reported to Birmingham City Council. Immediately following the events, Birmingham City Council distributed approximately 2,000 'Flood Surveys' to all residents within, or in close proximity to, all areas where flooding was reported.

Flood surveys are important as they provide accounts of duration and depth of flooding along with any other pertinent information. These responses can accurately report internal property flooding, flooding to gardens and flooding to highways and surrounding areas.

Although neither the 2020 or 2021 thunderstorms did not trigger formal s19 investigations, mainly due to the sheer amount of intense nationally experienced rainfall that overwhelmed sewers and smaller watercourses – a Stage 1 investigation was undertaken for each reported incident to ascertain the source, path and receptors affected by the flooding. Flood Questionnaires were sent out and COVID-secure site visits were undertaken in order to gather information and to inform any future mitigation. These locations have now been added to the six year pipeline of schemes such as the 'Highway Drainage & Sewer Renewal Programme' - a renewal and upgrade scheme in conjunction with BCC Highways and Severn Trent Water; a 'City-Wide Culvert Renewal Programme' to reline or upgrade culverts in a poor state or condition; and a 'City-Wide PFR (Property Flood Resilience) Programme' to capture properties where an engineered solution is unviable or not cost-effective, in line with the Environment Agency's partnership funding arrangements.

Groundwater

Birmingham is located over a principal aquifer. The Birmingham Strategic Flood Risk Assessment indicates that it is expected that groundwater levels will continue to rise towards its natural level as industrial abstractions continue to cease; and this is believed to be the cause of groundwater flooding within the council boundaries. Groundwater levels depend on aquifer properties, local geological conditions and a complex balance between recharge from rainfall, and discharges to rivers or pumped abstraction. Groundwater levels can change seasonally and rebound to the surface after a period of prolonged rainfall. Groundwater levels are measured in metres above ordnance datum and levels normally rise and fall with the seasons, reaching a peak in the spring

after being replenished through the winter (when evaporation losses are low and soil moist). Levels then tend to decline through the summer and early autumn.

Groundwater levels in Birmingham and London have been rising due to the cessation of pumping from wells, and abstractions not being as frequent as they once were at the start of the 20th century. Persistent rainfall across the Trent Catchment and snowfall means that groundwater has become a re-emerging issue across areas of Birmingham.

Detailed Investigation and Analysis

The Lead Local Flood Authority conducts detailed investigation and individual location analysis of each area where a property experienced internal flooding. These investigations typically include a review of existing infrastructure and topography, identification of predominant flow paths, site visits and local knowledge gathering. Through a detailed analysis, the Lead Local Flood Authority has identified the types of flooding that occurred at each location during the events of both June 2016 and May 2018.

The Flooded Sites Action Tracker has been updated following the flooding incidents in June 2020, with any feasible cost-effective options to be brought forward into the new pipeline of schemes. The team have also been collating flood questionnaires and advising other risk management authorities on mitigation, whilst ensuring high risk structures are kept clear from blockage.

Recommended Actions

Following analysis of affected areas, the Lead Local Flood Authority works in collaboration with other Risk Management Authorities to identify opportunities and options to mitigate flood risk, as the potential that a similar rainfall event will result in similar outcomes.

2.3.2 Section 19 Flooding Investigation Report

The Flood and Water Management Act places a duty on Lead Local Flood Authorities to investigate incidents of flooding and this is set out in Section 19 of the act and the investigations are therefore typically termed '*Section 19 Reports*.' The final May 2018 report was published on 30th August 2019 following sign off by the Strategic Flood Risk Management Board as per the previous Section 19 report into the May 2016 flooding. Birmingham City Council and other Risk Management Authorities continue to progress the actions identified in the May 2016 and 2018 Section 19 Reports with updates given at the Strategic Board and Water Group.

2.3.3 Flooded Sites Action Tracker

Flood events are tracked in a Flooded Sites Action Tracker. A copy of the most recent tracker is attached in Appendix A. As a result of the May 2018 flooding the number of locations on the tracker has increased substantially. However, plans are in place for the majority of locations, but solutions range from works in the current year, through to proposals for longer term national and regional grant funding.

2.4 Register of Flood Risk Management Assets

Birmingham City Council continues to maintain a register of structures or features which, in the opinion of the authority, are likely to have a significant effect on a flood risk in its area. This register can be viewed online.

A number of assets have been inspected over the last year in line with the inspection frequency set out in the asset register. Where an issue with an asset has been identified the asset owner has been notified and asked to undertake the necessary maintenance works.

The team has also developed our own Hydraulic Maintenance of Structures (HMOS) database to identify the maintenance priority of structures from potential blockages and the resultant extent of flooding if no cyclical maintenance is undertaken in high risk areas. This database is to be used as the main driver to develop and promote the FRM Capital Programme of works.

2.5 Consenting Works on Ordinary Watercourses

Birmingham City Council as Lead Local Flood Authority is the Authority responsible for regulating activities on ordinary watercourses in Birmingham. As a result, Birmingham City Council is legally responsible for dealing with applications for ordinary watercourse land drainage consents. In 2021, fifteen applications were received for in-channel works or for works within byelaw distance of ordinary watercourses. The team also advise on internal works and HS2 crossings / exempt activities.

2.6 Works to Manage Flood Risk

The Lead Local Flood Authority has delivered a number of capital and revenue schemes. These works are funded from a variety of funding mechanisms and a considerable number of flood risk management works have been delivered internally on behalf of other Birmingham City Council service areas. Most notably the Flood Risk Management Team works routinely with our Leisure services teams to provide consultancy services for drainage and environmental improvement works. The team also arranges statutory inspections under the Reservoir Act 1975 in order that the Council's large raised reservoirs are managed in accordance with the Act.

The Environment Agency pipeline is a rolling 6-year programme which can be both updated annually with schemes either brought forward or pushed back, depending on the availability of funding and is fluid. This 6-year programme allows for the development of schemes which will be delivered in future years. The delivery of the Flood Defence Grant in Aid and Local Levy programme for 22/23 includes flood alleviation for up to fifty properties and it also includes studies to inform schemes to explore preferred cost-effective options. Birmingham-led projects and works including flood mitigation and drainage improvements for other teams and directorates will take place outside of this external programme, as detailed below:

The following works have been progressed since January 2021.

2.6.1 Grant Funded: Flood Defence Grant in Aid and/or Local Levy

Community flood resilience measures: (e.g. construction of land drainage to benefit communities and local investigation / measures

- **Eastern Road** - complete. Creation of a bund benefitting four properties to lessen flood risk.
- **Ripple Rd** – In progress to replace two missing flood guards in shared alleyways to benefit the lines of terraced properties.

Grant Funded: External Organisations (Partnership working)

- **First Avenue Flood Alleviation Scheme (River Rea)** – Removing two significant weirs and partial removal of two others to help naturalise the channel and lower water levels. Re-profiling existing channel, bank stabilisation for Environmental, habitat and Flood improvements (the Environment Agency)

2.6.1 Works Funded by Flood Risk Management Revenue Budget

Routine clearance to all strategic grill structures (frequencies vary from weekly to 6-monthly depending on the criticality of the asset) and additional grill clearance following severe weather.

2.6.2 City Wide

Sandbag distribution and re-stocking of Hydro-snakes when requested to Flood Action Groups. Neither sandbags nor hydrosnakes were issued in 2021. The following locations are where we have agreed to issue sandbags as these areas are supported by a Flood Action Group:

- **Selly Park South**

- **Selly Park North**
- **Northfield**
- **Sparkhill.**

Restoring flood channel/culvert capacity by excavation, cutting back vegetation and removing major blockages:

- **River Cole** - Formans Road to Nethercote Gardens
- **Plants Brook** - Ebrook Road to Eachelhurst Road
- **Turves Green Brook & Tributary to Bourn Brook** - Kingswood Road to Turves Green & Arosa Drive to Beaumont Drive
- **City Wide** - Flood Asset Maintenance works to all strategic grills
- **Handsworth Wood Brook** – Oxhill Rd to Sunningdale Close
- **Inspecting strategic culvert structures.**

Other flood alleviation Projects

- **Sunningdale Close, Handsworth Wood** - 1) Breakout and rebuild existing wing walls and to accommodate the installation of two bends with concrete surround to form new inlet structure; 2) Fabricate and install new raking trash screen to new inlet structure; 3) Provide and install non- return flap valve to existing outfall; 4) Construction of a new brick flood wall and water tightening measures to existing concrete panels
- **Silvercroft Avenue, Handsworth Wood** – Construction of new culvert and off-line flood storage balancing pond.

2.6.3 Inspection & maintenance work to flood defence assets:

- **Tysley Brook, Hall Green**
- **Oddingley Road, Turves Green**
- **Park Lane, Castle Vale**
- **Steel Road, Turves Green**
- **Eachlehurst Road, Walmley Ash**
- **Washwood Heath Road, Ward End**
- **Maintaining safe and clear access routes to flood defence assets and to ensure that they operate as per the original design.**

2.6.4 Works provided for other BCC Departments

On behalf of the **Local Planning Authority:**

- **Sustainable Drainage and permeability / suitability checks** - To inform Sustainable Urban Drainage Strategy (SuDS) suitability for the Strategic Housing Land Availability Assessment (SHLAA) sites on behalf of the Local Planning Authority. The Flood Risk Management team have processed approximately 20 pre-application requests and provide advice on drainage considerations and flood risk.
- The team also advise on the flood risk appropriateness of development sites put forward for development, drainage issues and surface water drainage. The team also advise where

needed on policy documents, neighbourhood plans, supplementary planning documents, and environmental improvement schemes and proposals.

On behalf of **Housing**:

- **Fisher Close** – Excavate and removal of silt to restore storage capacity of pool, and erection of safety fencing
- **Merrits Brook** - Channel clearance, removing major blockages and excavation works to restore channel capacity.

On behalf of **Bereavement**:

- **Handsworth Cemetery, Handsworth** – Site investigation works and analysis to localised flooding - resulting in proposals to drain plots to allow further burials.

On behalf of **Leisure**:

- **Alexander Stadium, Perry Barr** – Consultation work with Alexander Stadium team regarding the reconstruction of the stadium in preparation for Commonwealth Games 2022, and the additional drainage and effect on the Reservoir and Dam.
- **Wyndley Leisure Centre, Clifton Road, Sutton Coldfield** – Installation of strip drainage around a section of the building to alleviate internal flooding to Leisure Centre
- **Ward End Pool** – Consultation and advise for Pool improvement scheme
- **Geranium Close** – Clearance of major blockages consisting of fallen trees and urban debris to restore channel capacity to prevent localised flooding
- **Tennal Lane Allotments brook** - Clearance of major blockages consisting of fallen trees and urban debris to restore channel capacity to prevent localised flooding
- **Rose Hill** – Renewal of safety fencing and bank stabilisation.
- **Valley Parkway Pool** – Reshaping and top soiling land adjacent to pool following desilting
- **Manor Farm Pool** - Reshaping and topsoiling land adjacent to pool following desilting
- **Handsworth Park Pool** – Upper Pool re-profiling and desilting to improve water quality.
- **Brookvale Park Pool** – CCTV Survey and inspection of overflow siphons and breather pipework.

On behalf of **Highways**:

- **Selly Park North** - Additional gullies Selly Park North area
- **Section 38 agreements / Highway Improvement Schemes** – technical advice for highway Sustainable Urban Drainage Strategies (SuDS) and adoption.
- Working on **highway surface water problems and flooding issues** to help promote improve maintenance regimes and improvements to the Highway Drainage infrastructure to reduce flooding properties internally.
- **Plants Brook** – Upper Holland Rd -Restoring flood channel capacity by excavation, cutting back vegetation and removing major blockages

2.6.5 Reservoir Works provided for BCC Leisure Services

- **Reservoir Act 1975 Section 10 and 12** - Inspections City Wide. Commission of 11 Section 12 Inspections by Supervising Engineer and 3 nr Section 10 Inspections by Inspection Engineer at Perry, Swanshurst and Wyndley Reservoirs.

- **On Site Emergency Plan** – Commission of an Onsite Plan to comply with new legislation for **each** of the 11 Large Raised Reservoirs.
- **Lifford Reservoir, Kings Norton** – Work on site to repair erosion to crest and increase height to design level for reservoir to prevent overtopping in an extreme event. Maintenance work to dam in preparation of Section 12 inspection.
- **Longmoor Reservoir, Sutton Coldfield** – Repair to main scour penstock to prevent leakage. Fitting of anti-vandal device to prevent unauthorised operation.
- **Perry Reservoir** – Following the section 10 inspection work commissioned to calculate drawdown rates, and produce a drawing showing all drainage around the reservoir, including newly constructed flow attenuation tanks for Alexander Stadium. Other work includes CCTV Survey of pipework under and around reservoir, replacement of inspection chamber covers, repair to penstock mechanism, and repair to brickwork on inlet headwall by stadium.
- **Powells Reservoir, Sutton Park** – Repairs to the existing brick and concrete spillway slabs and reconstruction of expansion joints to restore structural integrity. Erection of new permanent safety steel fencing
- **Salford Reservoir, Aston** – Penstock refurbishment to allow free operation of spindle.
- **Swanshurst Reservoir, Springfield** – Commissioned review of Flood study, and a review of the current surface of the downstream face. Other work includes a CCTV Survey of pipework in the dam, repair work to the auxiliary spillway to eliminate depressions, and repacking gabions.
- **Wyndley Reservoir, Sutton Coldfield** – Commissioned work to carry out a topographical survey of the dam, and to review the most recent flood study in the light of new recommendations. Other work includes construction of a reinforced concrete apron downstream of the penstock control to prevent erosion of brook following its operation. The fractured section of spillway slab cleaned and holes drilled to ascertain its thickness and resistance to uplift.

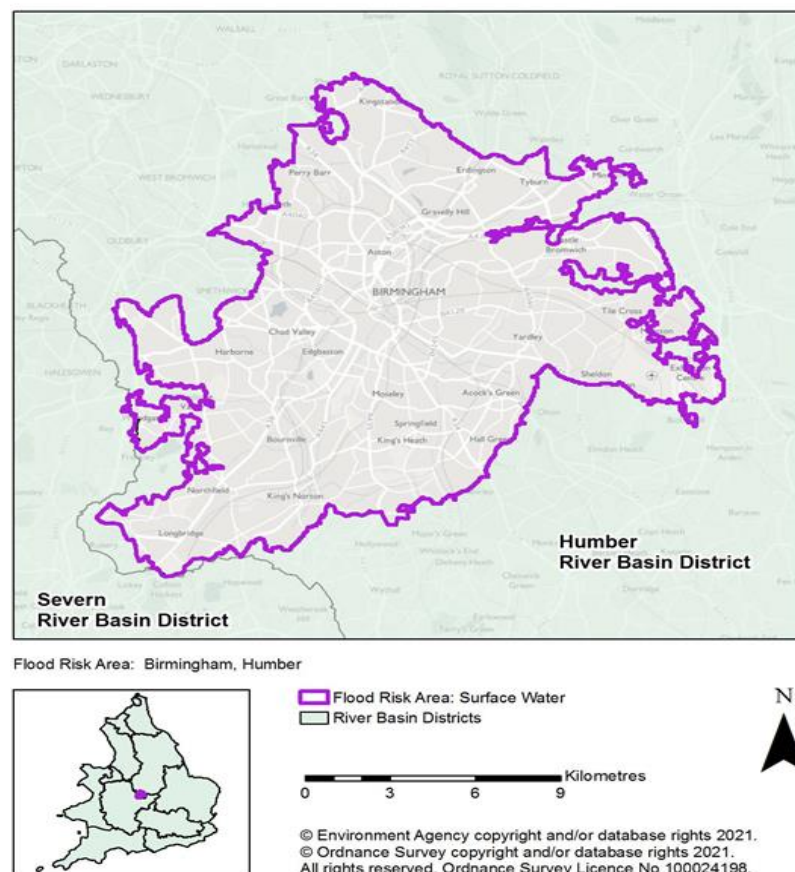
3. Flood Risk Regulations Duties

The Flood Risk Regulations implement the EU Floods Directive in England. They provide a framework for managing flood risk over a 6 year cycle, comprising:

- Preliminary Flood Risk Assessment (PFRA)
- identification of areas of potential significant risk, referred to as Flood Risk Areas (FRAs)
- mapping of flood hazards and risk and
- Flood Risk Management Plans (FRMPs), setting out measures and actions to reduce the risk.

Birmingham is noted as a pluvial (surface water) Flood Risk Area and the Environment Agency have designated Sparkhill and Selly Park as Fluvial (River) Flood Risk Area, from the River Cole and River Rea respectively, and they have duly updated the Flood Risk Measures for these areas.

The Birmingham Flood Risk Area (FRA) has been identified as the flood risk from surface water is considered nationally significant. Birmingham City Council, Solihull Metropolitan Borough Council, Dudley Metropolitan Borough Council, Sandwell Metropolitan Borough Council and Walsall Metropolitan Borough Council as Lead Local Flood Authorities take the lead on the development and delivery of the FRMP for this FRA and are responsible for managing flood risk from 'local' sources such as surface water, groundwater and ordinary watercourses.



Map showing Birmingham Flood Risk Area (differs from BCC administrative boundary)

Surface water flooding in the FRA occurs due to natural and artificial influences. Quite a high percentage of the rain that falls in the upper Tame catchment runs off it as drainage is impeded by the overlying loamy clay soil. Water flows overland entering built up areas. Heavy rain also ponds or flows off impermeable surfaces in the urban areas where it cannot soak into the ground. Urban drainage systems become overwhelmed or unable to discharge into receiving watercourses due to high water levels.

There are sixteen Main Rivers in the Birmingham FRA and numerous ordinary watercourses including unnamed streams and ditches. Many of these rivers and streams are susceptible to flooding. The fast run off from the upper catchments and run-off entering the watercourses from the urban areas means there is a rapid response to heavy rainfall. Historically flooding has been caused by channels not being able to take the high volumes of water and also by blocked culverts. Siltation and blockage of key structures can exacerbate flood risk and fly tipping is detrimental. Various communities are at risk of flooding - Selly Park and Sparkhill have been identified as Fluvial (River) Flood Risk Areas where the flood risk from rivers is considered nationally significant.

Lead Local Flood Authorities worked with the Environment Agency to publish the first set of Flood Risk Management Plans, covering the 10 river basin districts in England, on 17 March 2016. These plans set out how Risk Management Authorities are working together, and with communities, to manage flood and coastal risk over the next 6 years up to December 2021.

We have worked with the Environment Agency and neighbouring Councils to amend, transition and bring forward measures for the next 6-year cycle. Birmingham is noted, along with other large, dense conurbations as a Flood Risk Area, as there are a significant number of people, infrastructure and businesses, susceptible to a range of sources of flood risk

A high-level analysis of the 30-year 'Risk of Surface Water Flooding' dataset (high-risk) shows that there are 39 properties and 3 businesses at risk in Sparkhill Ward. There are 1,785 people (average household size) within the Sparkhill Flood Risk Area, with 358 properties at medium risk, and 386 at risk overall.

There are also 119 non-residential properties, with 66 at risk, as taken from the 'Flood Risk Maps for Rivers and Sea in England - December 2019'. The Social Flood Risk Index recognises Birmingham as one of the ten most flood disadvantaged local authorities in UK, and provides the most direct measure of flood disadvantage. Birmingham is also in the top ten for the 'Expected Annual Damages (EAD, £m) - Residential only' metric.

4. Statutory Consultee Role for Planning

The Lead Local Flood Authority is a statutory consultee for surface water on major developments (10 dwellings or more; or equivalent non-residential or mixed development). Local planning decisions are expected to ensure that Sustainable Urban Drainage Strategies (SuDS) for the management of runoff are put in place unless demonstrated to be inappropriate and that the sustainable drainage system should be designed to ensure that the maintenance and operation requirements are economically proportionate.

The number of applications, discharge of conditions and pre-app enquiries in between 2017 and 2020 is as follows:

Year	Total No. of Applications	Major Planning Applications	Pre-App/General Enquiries	Discharge of Condition
2017	405	185	94	126
2018	392	140	83	169
2019	577	274	59	322
2020	613	285	32	210
2021	tbc	tbc	tbc	tbc

The statutory consultee role ensures that proposed developments and surface water drainage schemes are future-proofed in line with the National Planning Policy Framework (NPPF), with appropriate climate change allowances and conforms to the Council's Planning Policies, Birmingham Development Plan, Big City Plan, SPDs and other planning documents.

The LLFA has been a key consultee in the development of Rea Valley SPD which is the largest city brownfield regeneration scheme in England. We have also advised on flood risk, drainage and the creation of community scale green and blue infrastructure. We have also been providing detailed advice and guidance in relation to the new urban extension to the City in Peddimore, Sutton Coldfield and the creation of a naturalised Langley Brook and community scale SuDS.

We are working with planning colleagues to improve ways of working and to form a framework for better responses and to inform planning applications more efficiently and effectively. We are discussing validation requirements, and the provision of standing advice for low-risk applications to lessen the burden on the statutory planning role within the Flood Risk Management team and to provide timely advice back to the planning teams.

In turn, we are assisting the enforcement officers with high-profile cases to advise on drainage issues and likely causes of flooding. In the future, we hope to work with Planning and Planning enforcement to act as an internal consultee / consultant to advise upon unpermitted and any development not in accordance with the approved details, which impact upon flood risk or drainage. The Flood Risk Management team also act as facilitator between the Council and other risk management authorities and Birmingham uses the Flood Risk Management team's experience to better inform and warn those at flood risk. The team have continued to inform and respond to planning applications despite a third-fold increase on previous application numbers.

By informing Birmingham City Council policy, it is through strategic planning policies where we can inform major development most effectively – and having an over-riding drainage and flood risk policy such as TP6 helps to detail the surface water rates and volumes and required planning mitigation to ensure a high quality and sustainable development. The LLFA continues to influence planning applications and secure developer contributions whilst responding to changes to the planning system, ensuring that proposals are in line and proportionate to new guidance and amendments to the GDPO and 'use' classifications. We have also given detailed pre application advice internally to highways, and the Birmingham Housing Development Team, to help ensure that sites that are sensitive to flooding are appropriately designed to reduce and mitigate those risks, and the sites have the optimum number of new homes.

In the last year the team has engaged with the Climate Change Justice Maps, highlighting the importance of flood risk management, and utilising Green and Blue corridors throughout the city as multifunctional spaces for environmental enhancement as well as health and wellbeing which has influenced the City of Nature document, which highlights the opportunities to expand the green and blue infrastructure network in locations of flood risk from both fluvial and surface water flooding. The city has developed a Sustainable Finance Framework with external green investors allowing for the long-term investment into the city's blue and green infrastructure.

The LLFA have influenced the Perry Barr Masterplan which promotes flood resilience, SuDS and green and blue infrastructure to manage surface water within new areas of public realm and public spaces, and new developments. Specifically, the document introduces strategies for sustainable spaces and buildings, including sustainable water management and urban drainage, green walls and roofs, and opportunities for low carbon heat and power.

We have been working to support the revised masterplan for the Smithfield regeneration scheme in development, prioritising flood risk management from all sources and the incorporation of green and blue infrastructure within streets and the public realm.

The LLFA help to represent Birmingham City Council in the international network of biophilic cities group supporting best practice environmental projects. We have also supported the delivery of the Commonwealth Games by providing technical guidance on areas of Public Realm improvements in the city centre, including the Victoria Square / Colmore Row enhancements, and the China Town area as well as facilities at events locations including the new carpark and supporting infrastructure in Sutton Park.

The LLFA has also had a key role in the regulation of HS2 construction and ensured that they are taking action to naturalise and improve watercourses, incorporate SuDS wherever possible and limit discharge rate as far as practicable to the greenfield run off rate from their new developments.

5. Funding

5.1 Funding Streams

Funding for Lead Local Flood Authority

Funding for Lead Local Flood Authorities to meet the duties under the Flood Water Management Act is provided to Birmingham City Council as part of the Local Government settlement. This funding is not ring-fenced and the budget for the Flood Risk Management Team was reduced due to financial pressures on the Council.

Environment Agency Partnership Funding Calculator

On 17 April Defra and the Environment Agency published new guidance on partnership funding for flood and coastal erosion risk management. The changes are part of a suite of initiatives to help deliver the ambitions of the 25 Year Environment Plan and the new FCERM strategy. The Partnership Funding rule changes include:

- Updating payment rates to reflect inflation and new evidence on flood damages since 2011 (including people impacts such as mental health);
- Amending the flood risk bands for qualifying schemes to add a new intermediate risk band between high and medium risk. This will mean more schemes that reduce surface water flood risk are likely to receive government funding in the future;
- Accounting for the future impacts of climate change by also including people and properties that would potentially become at risk over the lifetime of a project;
- Improving the payment rates for environmental benefits to capture more fully the wider environmental benefits delivered by flood and coastal erosion risk management projects and to help support nature-based solutions.

Revenue Budget

A small budget is provided to support flood management responsibilities, these include land drainage, maintenance of ordinary watercourses and emergency response. This budget has reduced over recent years in line with City Council budget cuts. A risk-based approach is undertaken to ensure that high risk grills are cleared before and after heavy rainfall as the strategic grills have a real impact on flood risk if left occluded.

Flood Defence Grant in Aid - Partnership Funding

In the past, flood risk management schemes were generally funded by central government through the Flood Defence Grant in Aid (FDGIA) process which allocated funding to projects nationally based on cost/benefit prioritisation. This led to only schemes that scored highly in terms of benefits outweighing costs being taken forward.

From 2012, a revised approach has been undertaken. Funding levels for each scheme, paid by central government as Flood Defence Grant in Aid, relate directly to the benefits the scheme delivers, including number of households protected, damages prevented, deprivation, environmental benefits and amenity improvement. If the FDGIA does not cover the cost of the scheme, in order to progress a scheme the cost / scope can either be reduced and/or local contributions would need to be found. In 2020, the Environment Agency published a new Partnership Calculator, with overall improved grant rates for surface water schemes.

Local Levy

The City Council pays levies to the Environment Agency in the form of Local Levy, in 2020/21 the Local Levy contribution was £298,990. The Local Levy is raised by the Regional Flood and Coastal Committee (Birmingham sits within the Trent Committee area) and is used as a locally-raised source of income to fund projects within the Trent region. Local Levy can be used to fund projects that might not be eligible for national funding or as a regional contribution to scheme costs under the partnership funding approach. It is envisaged that Birmingham will aim to draw down up to £325,000 in Local Levy monies over the next 6-year pipeline.

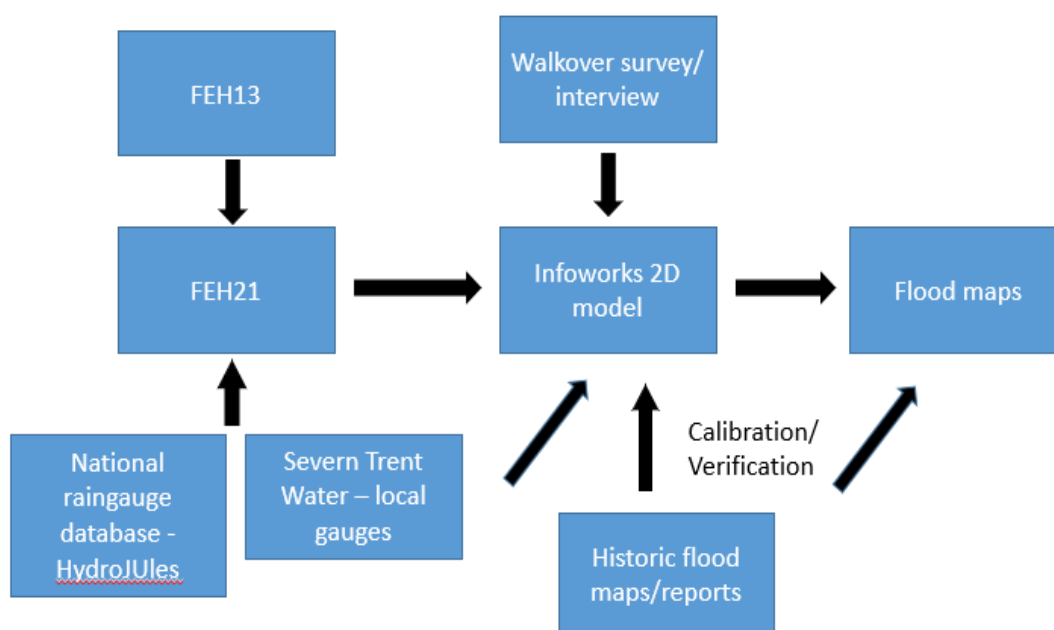
The RFCC has ratified a 2% increase to local levy payments in 2022/23 bringing the amount to £304,970. A 2% increase would provide a 28 to 1 cost benefit ratio, however the 2% increase would be a reduction in real terms with the cost of inflation. Levy balances have reduced significantly from a high of £6.12m in 2015/16 to less than £1m in 2021/22. Birmingham City Council are a significant net contributor to the pot but has an equal chance of securing the funding relative to net beneficiaries for Councils within the Trent RFCC.

The amount raised from each Local Authority is based on the number of Council tax band D properties which has been agreed as a fair and equitable basis for the calculation. A 2.2% increase was approved by the RFCC in 2020, generating an additional £42,746 across the Trent RFCC area. Votes to increase the Local Levy payments are held each year and is linked to any National Grant in Aid underspend, The Environment Agency will be looking for opportunities to strengthen the Grant in Aid position by switching funding streams such as Local Levy to maximise the monies available.

In February 2021, Birmingham City Council has been offered a representative position on the Trent Regional Flood and Coastal Committee Financial sub-committee. As the largest Council in the Trent RFCC area and as the largest Unitary Council nationally, this is an important step to understanding the nuances of Local Levy bid appraisal and the approval criteria of the sub-committee. This representation will serve the Council well, and BCC will be able to maximise our Local Levy we contribute as a Council and have a say where Local Levy should be used across the Trent RFCC area.

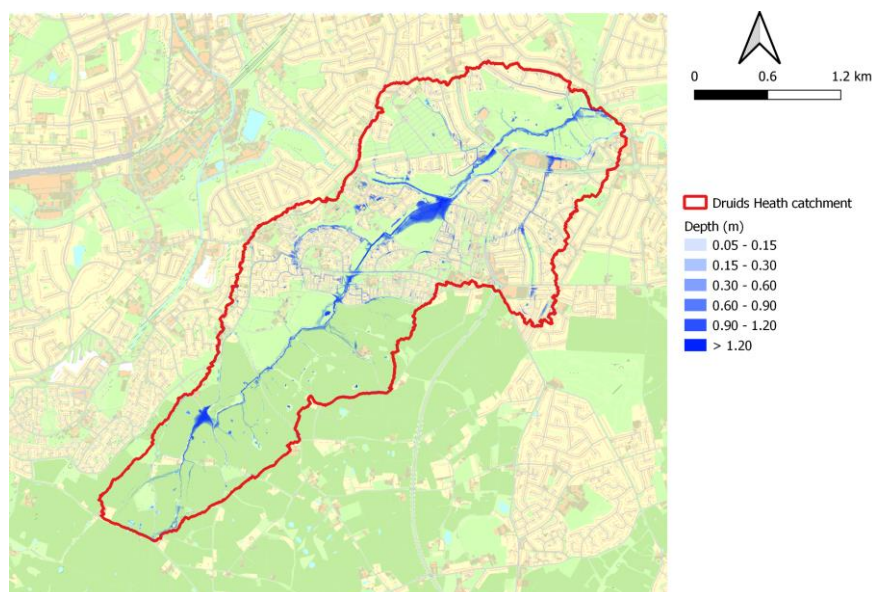
DEFRA Boosting Action for Surface Water

DEFRA's national project called Boosting Action in Surface Water was a competitive funding stream working in conjunction with Lead Local Flood Authorities who put forward successful bids for Tranche 1 and Tranche 2 were evaluated and assured by DEFRA. Birmingham City Council had been successful in a bid for Druid's Heath and the outputs of this project will be used to develop a long-term strategy to manage the flood risk throughout the Druids Heath catchment. It is also anticipated that the improved mapping and modelling will support the wider internal regeneration aspirations of the area.



The Environment Agency national dataset – the ‘Risk of Flooding from Surface Water’ maps were seen not consistent with observed flooding and therefore had low confidence. Areas in Druids Heath are looking to be earmarked for regeneration and therefore there was a need for accurate mapping across the catchment.

The detailed model allowed for thorough analysis of causes of flooding and the comparison with the Environment Agency surface water maps in the context of assumptions were made in the models. The Depth Duration Frequency model was updated using both FEH13 versus FEH21 events with an analysis of uncertainties (i.e. precursor weather conditions, such as a wet or dry catchment. This model and associated mapping will form the basis for the optioneering of flood alleviation measures to be taken.



5.2 Funding Pressures

Historic reductions in budget due to savings requirements have made it increasingly difficult to fulfil the duties under the Flood and Water Management Act, carry out the statutory consultee role for planning and undertake maintenance of flood risk management assets and provide emergency response.

The Partnership Funding process has resulted in a range of funding sources being required to promote and deliver flood risk management schemes. For some schemes this includes an element of Flood Defence Grant in Aid together with an element of Local Levy but for many schemes this still leaves a shortfall which needs to be provided as third-party contributions. This approach puts significant pressure on limited resources to foster agreements and collaborations to facilitate schemes. In order for these schemes to progress local contributions or contributions from beneficiaries of the schemes need to be sought.

Aligning funding sources and facilitating the promotion of projects as well as seeking new funding opportunities continues to be a major priority for the Strategic Flood Risk Management Board and Flood Risk Management team going forward into 2022..

The Flood Risk Management team are a highly technical team and as from January 2021, are carrying one vacancy which has gone out to internal recruitment. The team can cope with the majority of demands in terms of projects, schemes and community engagement. However, the LLFA are struggling to provide timely responses to the sheer number of Developer and Planning enquiries expected of the team. We continue to liaise with the Planning Teams to see if they're able to provide financial support so we may gain additional resource.

Whilst we endeavour to be pre-emptive, there will always be an element of having to react to conditions and weather events as they develop. Although we can prepare for the challenge of climate change, as a Council, we will also need to develop an improved understanding of our reliance upon historic and aging infrastructure and work closely with partners, Members and communities, to upgrade systems where necessary and to find funding streams to enable us to become more resilient for the future. Please refer to Section 7.1.

6. Scrutiny: Previous Actions for Improvement

Subsequent to the flooding on 27th May 2018, a motion was passed at the Birmingham City Council meeting on 12th June 2018 calling for an inquiry into the floods of May 2018, to be carried out promptly. The motion called for the inquiry to include strong resident input and for the report to be

debated as a main agenda item at a future City Council meeting. The review was conducted by members of the Sustainability & Transport O&S Committee on 19th July 2018. A number of areas for improvement were noted in the subsequent investigation report. Progress against each area for improvement is outlined below.

6.1 Emergency Response Procedures

Area for Improvement: *This flood was significant and although not classified as a Major Incident and no triggers to activate the Emergency Arrangements were met, the impact was significant for all those concerned. The lack of notification and alerting by strategic partners resulted in the City Council not being able to establish the level of coordinated support it would wish. As part of a wider review, the City Council is enhancing its response and emergency arrangements, lowering the triggers to alert the Resilience team and ensuring their involvement. It is also working with strategic partners to ensure that more robust notification of incidents occurs. These changes are needed to provide residents and businesses with a more coordinated support package both during and after such flood events which meet the changing needs of residents during the recovery cycle.*

Update: The Council's Emergency Plan has been reviewed and an interim update has been issued with the latest version was published in March 2019. All core council roles within the plan have been identified and training provided and activation of the duty officer (Council) remains key to activating any of our arrangements. The proactivity of the duty officer has been increased and we are actively promoting the notification of Birmingham City Council from partners (and following up any missed notifications) by partners. In heavy storms and thunderstorms, the FRM team monitored rainfall, undertook site visits and checked river levels and informed and liaised with Flood Action Groups at risk.

6.2 Model Constitution or Model Template for Flood Action Groups

Area for Improvement: *During the evidence gathering there was an offer of support from the National Flood Forum to liaise with the City Council and to provide advice, mentoring and support to local residents wishing to set up a FLAG. It is hoped that Birmingham City Council will respond positively to this offer and that a model constitution or model template for FLAGS can be produced which can be made available as a resource to support local people to set up and run FLAGS in their area. However, as with any potential provision of support from the NFF to supplement the Birmingham City Council functions (either through establishing FLAGS or supporting citizens in recovery following an incident), funding will need to be identified and a clear understanding of what will be delivered for that funding will have to be agreed with the NFF and potentially other partner organisations.*

Update: The Birmingham City Council Resilience team have been supporting FLAGS as much as it can alongside their other duties, since the floods in May 2018. Birmingham City Council working in partnership with the Environment Agency intends to promote the existing FLAG template prepared by the National Flood Forum. Flood Risk Management and Resilience will be considering how the NFF can support Birmingham City Council in the future. With a fully staffed team from 2020, the FRM team have been able to and can further assist communities with setting up FLAGS and attending public virtual meetings. Groundwork West Midlands have been commissioned by the Environment Agency to support the FLAG in in Sparkhill by increasing personal resilience and to provide training to Flood Action Group members. Due to COVID-19, any public events were cancelled, however Groundwork look to continue this project with community events in 2022.

In terms of the National Flood Forum (NFF), the Flood Risk Management team and the NFF worked closely to submit a sizeable bid to the EA's Innovation Fund for a waste management, flood risk and environmental improvement drive across Sparkhill, Sparkbrook and Balsall Heath East and West. The team also submitted a bid to support SuDS streets in the Urban Quarter, around Digbeth. Although unsuccessful for both, the team will continue to seek funding opportunities

6.3 Traffic Management during flood events

Area for Improvement: ***The issue of Traffic Management during flood events needs to be followed up with both West Midlands Police and National Express West Midlands and other bus operators to make sure that a mechanism is put in place to ensure that traffic is re-routed and diverted away from flooded areas during a major incident.***

Update: Whilst it remains an operational consideration of all transport providers as to their routing, when activated, there are links and mechanisms in place to engage transport providers by Birmingham City Council as part of all our arrangements, the duty officer is able to contact transport providers and will endeavour to in a prioritised way (e.g. after dealing with risk to life and similar resident issues). This issue became apparent again in June - July 2021, where major motorways, railways and routes were inundated with surface water. It's difficult to manage traffic flows when areas are subject to flash flooding, however good communications help to warn and inform people of any diversions and of safer routes to take.

6.4 River Cole Valley Partnership

Area for Improvement: ***A River Cole Valley Partnership arrangement should be pursued by the Environment Agency along the lines of the arrangements already in existence for the rivers Rea and Tame, to facilitate the provision of flood defence and flood alleviation measures along the River Cole Valley.***

Update: The Environment Agency and Birmingham City Council have been working together since the floods of 2007 to develop flood alleviation measures along the River Cole valley. Over this time a number of partnerships have been developed including a joint study with Severn Trent Water and Solihull Metropolitan Borough Council. A number of options have been examined all of which failed to meet the central government cost benefit ratio for flood defence schemes.

The Environment Agency and Birmingham City Council have worked in partnership to undertake a debris removal along the River Cole since the flood event in May 2018. This work will reduce the risk of channel blockages and improve the conveyance of flows through the river.

In addition to this, the Environment Agency has been undertaking a programme of removing Japanese knotweed along the River Cole since 2018 as part of a 5-year eradication programme. This work will reduce the risk of damage to essential flood risk infrastructure.

The Environment Agency and Birmingham City Council have had further discussions since the 2018 flooding about developing a flood risk management scheme to offer protection to properties along the River Cole corridor including reviewing the risk status of the river and potential enmainment to identify funding opportunities.

The Environment Agency has suggested that a catchment wide approach to managing flood risk needs to be taken to develop a programme for the next central government funding cycle (2021 - 2026). It has been agreed to invite Solihull and Worcestershire, as neighbouring Lead Local Flood Authorities to form a catchment Partnership with Birmingham City Council and the Environment Agency to undertake an optioneering exercise to identify potential options for reducing flood risk.

In February 2020, Birmingham City Council set up a River Cole Working Group consisting of BCC Housing, Flood Risk Management and the Environment Agency to explore a catchment-based approach, suitable alleviation measures and funding opportunities to enable a suite of options to present to wider stakeholders and adjoining Councils in the upper reaches of the River Cole catchment. This information will be used to assess the number of properties at risk of flooding within the catchment and to assess funding opportunities through Grant in Aid, Local Levy and partnership contributions. We continue to press the Environment Agency for an alleviation scheme, given the known risk to communities along the Cole valley. In late 2021, the Birmingham City Council Flood Risk Management Team have submitted a bid to the Environment Agency for Property Flood Resilience measures for Sparkhill, subject to acceptance by the Environment Agency on the proviso

that the installation of property flood resilience measures would not compromise the delivery of any wider alleviation scheme.

7. Improvements

7.1 Flood Risk Management Team Pro-active Measures

The Team works with the Honorary Alderman who holds the Flooding Portfolio (on behalf of and in liaison with, the Cabinet Member) and continue to work closely with elected members and other teams to address flooding concerns and issues in their respective areas. We remain supportive, and endeavour to attract funding to help allay flooding and drainage and work with other teams to improve existing and inform proposed sites through Consenting and Planning. Birmingham is represented on the Trent Regional Flood and Coastal Committee (RFCC) and now have a regular representative on the Trent Financial Sub-Committee (FSC) to ensure that we maximise and realise funding opportunities as the one of the largest financial contributors of Local Levy in the Trent Regional Flood and Coastal Committee. It is important that our views are heard and that we work closely with other risk management authorities in partnership. The team also have a representative on the Chartered Institution of Water and Environmental Management (CIWEM) West Midlands Committee.

Developing HMOS (Hydraulic maintenance of Structures) to help inform prioritisation for a capital programme of important flood risk assets, mainly related to bridge and culvert structures. We have also been working with Highways Asset teams and Kier to identify areas which would benefit from highway drainage improvements. Alderman Kennedy is keen to establish a comprehensive capacity and condition review across all assets and locations for drainage and flood risks using best available data and analytics, scoping such an exercise is a challenge which needs careful planning with partners.

7.2 Flood Risk Management Audit

In early 2020, the Flood Risk Management team were audited for all aspects across the service area including, but not limited to:

- Co-ordination and monitoring arrangements established for flood management within the Directorate and across the Council as appropriate;
- Partnership working arrangements established with all relevant Risk Management Authorities and relevant external organisations;
- Arrangements for ensuring a Local Flood Risk Management Strategy for Birmingham has been established and is being kept up to date;
- Systems established to identify and prioritise any maintenance or improvement works required on the Council's watercourses.
- Mechanisms in place to ensure planning applications / any new development schemes are considering and identifying all appropriate measures to address potential flooding risks;
- Drainage Section's processes for identifying and obtaining appropriate sources of external funding to help support the Council in achieving its responsibilities as a Lead Local Flood Authority and a Land Drainage Authority.

The scope of the review was undertaken through a combination of discussions with key staff and examination of relevant documentation; to establish whether appropriate controls and processes have been established by the Council's FRM team to enable the Council to fulfil its roles and responsibilities as an LLFA and a Land Drainage Authority. The objective of the audit was to provide assurance that adequate and effective flood management arrangements have been established within the Council. No major concerns or issues were found by virtue of the audit and the team

received recommendations on how to further improve the service. The challenges that the team faced were found to be:

- To undertake further work with BCC Finance colleagues to ensure external funding can be approved in a timely manner.
- To ensure that the Council's LFRM Strategy is reviewed and updated – which is to follow after the publication / agreement of the FRMP measures.
- To review and update the terms of reference for both the Strategic Flood Risk Management Board and the Birmingham Water Group are reviewed and updated, which has been completed.

We hope to use the findings of the audit to develop agreed processes with our Finance, Procurement and Legal colleagues to help streamline the approval of grants and to update the Flood Risk Management Strategy reflecting new Local Government Association guidance, the FRMPs and Environment Agency National Strategy.

7.3 Consultants

Due to a current Principal Engineer vacancy in the team, the Flood Risk Management team are looking to secure consultant support to assist with fulfilling the Planning LLFA consultee role. Although the team are currently fulfilling all statutory roles - the demands on our service are such that we require additional support.

The team are still highly experienced in writing business cases, developing local engineering measures / options and liaising with communities and landowners. The team will continue to upskill where required and attract funds to enable the team to develop schemes whilst drawing on Consultant support for hydraulic modelling and other time / resource-intensive projects.

Appendix A - Flooded Sites Action Tracker

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
2016	1	Alum Rock	Assess whether additional gullies are required to allow runoff to drain	Highway Maintenance and Management Partner	Complete			
			Review maintenance regime to ensure gullies are free from debris	Highway Maintenance and Management Partner	Complete			
2016	2	Bartley Green	Investigate the capacity of the Bartley Brook and culvert	Birmingham City Council (LLFA) in partnership with Environment Agency	Complete			
			Develop an updated model of the watercourse through Senneleys Park including the Bartley Brook and other watercourses	Environment Agency in partnership with Birmingham City Council (LLFA)	Complete	Milestone 1: Undertake river survey	Jun-18	Complete
					Complete	Milestone 2: Incorporate river survey into Upper Bourn Brook modelling	Nov-19	Complete
			Investigate options to manage overland flows	Birmingham City Council (LLFA)	Complete			
			Investigate options for flood mitigation scheme	Environment Agency in partnership with Birmingham City Council (LLFA)	Complete	Milestone 1: Develop partnership and identify funding for modelling study	May-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
						Milestone 3: Strategic Outline Business Case	Sep-21	On going
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources.	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Complete	Milestone 1: Develop partnership and identify funding for modelling study	May-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
						Milestone 3: Strategic Outline Business Case	Sep-21	On going
			Assess the effectiveness of the installed property level resilience measures	Birmingham City Council (Housing)	Complete			
2016	3	Bartley Green (Dainton)	Explore the potential for flood mitigation by re-landscaping the garden and improving property drainage	Birmingham City Council (Housing)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Jun-17	Complete
					Complete	Milestone 2: Housing site visit to assess works and obtain quote	Mar-20	Complete
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Cancelled - action not relevant to this site			
2016	4	Bordesley Green	Review maintenance regime to ensure gullies are free from debris	Highway Maintenance and Management Partner	Complete			
			Explore the potential for flood mitigation	Birmingham City Council (LLFA) & Home owners	Complete			
2016	5	Bournville	Explore the potential to manage surface water flows within the public open space through SuDS and other measures	Bournville Village Trust	Complete			
2016	6	Falcon Lodge	Assess the condition and capacity of the sewer network in the vicinity of Carhampton Road, Glover Road and Churchill Road	Severn Trent Water	Complete	Milestone 1: Review at risk properties and add to register of sewer flooding	Jan-19	Complete
					Complete	Milestone 2: Pre-feasibility assessment of sewer flood risk	Mar-20	Complete
			Assess the condition and capacity of the highway drainage network to establish if additional gullies are required	Birmingham City Council (LLFA and Highways)	Complete			
			Assess the condition and capacity of the Churchill Brook to establish if additional capacity is required	Birmingham City Council (LLFA)	Complete			
			Explore the potential for flood mitigation	Birmingham City Council (LLFA and Housing)	Complete			
2016	7	Four Oaks	Assess the condition and capacity of the sewer network	Severn Trent Water	Complete			
			Assess the condition and capacity of the highway drainage network to establish if additional gullies are required	Birmingham City Council (LLFA and Highways)	Complete			
			Explore the potential for flood mitigation measures	Birmingham City Council (LLFA) and Homeowners	Complete			
2016	8	Hampstead	Explore the potential for flood mitigation measures	Birmingham City Council (LLFA & Leisure Services) and Homeowners	Complete	Milestone 1: Review potential for Flood Defence Grant funding	Apr-18	Complete
						Milestone 2: Meeting between BCC LLFA & BCC Housing to discuss issues	Feb-19	Complete
						Milestone 3: Review potential to complete work through BCC housing programme	Mar-20	Complete
2016	9	Handsworth Wood - Grestone	Review of maintenance regime for Hilltop Brook	Birmingham City Council (LLFA and Leisure Services) and Riparian Owners	Complete			
			Assess the condition and capacity of the Hilltop Brook	Birmingham City Council (LLFA and Leisure Services)	Complete			
			Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Initial investigation to determine impact of sewer flooding	Sep-21	Complete
			Assess potential for future flood storage scheme on Hilltop Brook	Birmingham City Council (LLFA and Leisure)	Complete			
2016	10	Handsworth Wood - Silvercroft	Installation of trash screen and review of maintenance regime for Hilltop Brook	Birmingham City Council (Leisure Services)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Leisure to discuss issues	Jul-19	Complete

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
2016	11	Harborne - Bourn Brook				Milestone 2: Consider the installation of trash screen	Mar-21	Complete
			Assess the condition and capacity of Hilltop Brook	Birmingham City Council (LLFA and Leisure Services)	Complete			
			Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 3: Initial investigation to determine impact of sewer flooding	Sep-21	Complete
			Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Include in Upper Bourn Brook Catchment Study Modelling	Jan-20	Complete
			Investigate reported instances of foul flooding	Severn Trent Water	Complete	Milestone 1: Include in Upper Bourn Brook Catchment Study Modelling	Mar-20	Complete
			Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete			
			Routine maintenance of the Bourn Brook and maintain capacity of the bridge arch	Environment Agency	Complete			
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going
2016	12	Harborne - Fredas Grove	Explore the potential to integrate flood storage within the Golf Course	Birmingham City Council (LLFA) and Harborne Golf Course	Complete			
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA) Severn Trent Water and Environment Agency	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going
2016	13	Harborne - Queens Park	Implementation of the proposed flood alleviation scheme	Birmingham City Council (Leisure)	Complete			
			Assess the condition and capacity of the sewer network	Severn Trent Water	Complete			
			Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete			
2016	14	Mere Green	Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Review at risk properties and add to register of sewer flooding	Jan-19	Complete
					Complete	Milestone 2: Undertake flow survey	Mar-22	Complete
			Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete			
			Explore the potential for flood mitigation	Birmingham City Council (LLFA), Severn Trent Water and Home owners	Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding in future programme	Mar-19	Complete
				Severn Trent Water		Milestone 4: Develop business case	Mar-22	On going
			Assess the effectiveness of the installed property level resilience measures	Severn Trent Water	Complete			
2016	15	Oscott	Investigate options to manage overland flows from the recreation ground	Birmingham City Council (LLFA and Leisure Services)	Complete			
			Explore the potential for flood mitigation	Birmingham City Council (LLFA) and Home owners	Complete			
2016	16	Perry Barr	Investigate options to manage overland flows from the Perry Park, including increasing the height of the bund	Birmingham City Council (Leisure Services)	Complete			
			Investigate capacity of Perry Brook culvert and interaction with River Tame defences	Environment Agency	Complete	Milestone 1: LLFA & EA to review available data	Jul-19	Complete
				Environment Agency		Milestone 2: Investigate options to manage overland flows from the Perry Park, including increasing the height of the bund	Sep-21	On going
				Environment Agency		Milestone 3: STW to instruct RPS to develop model and review options	Sep-21	On going
					Complete	Milestone 4: Investigate capacity of Perry Brook culvert and interaction with River Tame defences	Jan-20	Complete
				Severn Trent Water		Milestone 5: Pre-feasibility assessment of sewer flood risk on Church Road	Sep-21	On going
			Assess the condition of the sewer network in the catchment area	Severn Trent Water	Complete			
2016	17	Perry Beeches	Assess the condition and capacity of the sewer network in the catchment area	Severn Trent Water	Complete	Milestone 1: Pre-feasibility assessment of sewer flood risk	Oct-19	Complete
			Construct a hydraulic model to enhance understanding of flooding mechanisms and develop a set of options to mitigate flooding within the area	Birmingham City Council (LLFA)	Complete			

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
			Review maintenance regime to ensure gullies are free from debris	Highway Maintenance and Management Partner	Complete			
			Fix and maintain the drainage infrastructure from the elevated sections of the M6.	Highways England	Complete			
			Regular inspections of the Perry Brook culverts	Highways England	Complete			
			Regular inspections and maintenance of the open channel through Perry Park	Birmingham City Council (Leisure)	Complete			
2016	18	Quinton	Assess the condition and capacity of the sewer network in the catchment area	Severn Trent Water	Complete	Milestone 1: Include in Upper Bourn Brook Catchment Study Modelling	Nov-19	Complete
			Assess the condition and capacity of the culverted Quinton Brook	Birmingham City Council	Complete	Milestone 1: STW to undertake CCTV survey as part of wider works		Complete
					Complete	Milestone 2: Undertake remedial works to the brook.	Nov-19	Complete
			Review maintenance regime to ensure gullies are free from debris	Highway Maintenance and Management Partner	Complete			
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going
				Birmingham City Council (LLFA)	Complete			
2016	19	Roughley	Assess the condition and capacity of the sewer network in the vicinity of Slade Road and Willmott Road	Severn Trent Water	Complete	Milestone 1: Pre-feasibility assessment of sewer flood risk	Sep-21	Complete
			Assess the condition and capacity of the highway drainage network to establish if additional gullies are required	Highway Maintenance and Management Partner	Complete			
			Review of maintenance schedule of highway assets (e.g. gullies)	Highway Maintenance and Management Partner	Complete			
			Explore the potential for flood mitigation measures	Severn Trent Water	Complete	Milestone 1: Pre-feasibility assessment of sewer flood risk	Sep-21	Complete
			Assess the effectiveness of the installed property level resilience measures	Severn Trent Water	Complete			
2016	20	Selly Oak - Wood Brook	Continue to explore options for funding contributions towards Bourn Brook scheme	Environment Agency	Complete	Milestone 1: Continue consultations with potential funders	Oct-19	Complete
			Assess the condition and capacity of the sewer network in the Bristol Road	Severn Trent Water	Complete	Milestone 1: Pre-feasibility assessment of sewer flood risk	Sep-21	Complete
			Assess the condition and capacity of the highway drainage network to establish if additional gullies are required	Highway Maintenance and Management Partner	Complete			
			Review of maintenance schedule of highway assets (e.g. gullies)	Highway Maintenance and Management Partner	Complete			
2016	21	Selly Oak - Eastern Road	Explore the potential for flood mitigation measures	Birmingham City Council (LLFA) and King Edwards School	Complete			
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Cancelled - action not relevant to this site			
2016	22	Selly Park North	Modification of the private boundary wall and review of maintenance regime in Riverside Drive to accommodate surface water flows	Birmingham City Council (LLFA and Leisure Services) and Homeowners	Complete			
			Implementation of the flood alleviation scheme	Environment Agency, Birmingham City Council (LLFA) and Severn Trent Water	Complete			
			Assess the condition and capacity of the sewer network in catchment area	Severn Trent Water	Complete			
2016	23	Woodgate Valley	Construct a hydraulic model to enhance understanding of flooding mechanisms and develop a set of options to mitigate flooding within the area	Birmingham City Council (LLFA)	Complete			
			Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Include in Upper Bourn Brook Catchment Study Modelling	Nov-19	Complete
			Assess the condition and capacity of the highway drainage	Highway Maintenance and Management Partner	Complete			
			Review of maintenance schedule of highway assets (e.g. gullies)	Highway Maintenance and Management Partner	Complete			
			Review property level resilience scheme in Bean Croft	Birmingham City Council (LLFA)	Complete			
			Remove blockages and review maintenance regime of unnamed watercourse	Birmingham City Council (Leisure Services)	Complete			
			Develop catchment options across the upper Bourn Brook catchment to manage flooding from all sources	Birmingham City Council (LLFA), Severn Trent Water and Environment Agency	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
2018	1	Acocks Green - Broom Hall Crescent	Assess condition and capacity of sewer network	Severn Trent Water	Complete	Milestone 1: Undertake CCTV Surveys	Sep-21	Complete
					Complete	Milestone 2: Review existing modelling info and scope up any additional work required	Sep-21	Complete
					Complete	Milestone 3: Assess performance of sewer system	Sep-21	Complete
2018	2	Billesley - Ardencote Road	Explore the potential for community scale flood mitigation	Birmingham City Council (Housing) and Birmingham City Council (LLFA)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Apr-19	Complete
					Complete	Milestone 2: Undertake cost benefit assessment	Sep-19	Complete
					Complete	Milestone 3: Put forward Flood Defence Scheme for grant funding or Local Levy	Sep-19	Complete
2018	3	Bournbrook & Selly Park - Hubert Road	Explore potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 1: Undertake cost benefit assessment	Dec-19	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or advise property owners that they would need to self fund works	Dec-19	Complete
			Review maintenance schedule for highway assets	Highway Maintenance and Management Partner	Complete			
2018	4	Bournbrook & Selly Park - Oakfield Road	Explore potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete			
					Complete			
2018	5	Bournbrook & Selly Park - Selly Park North	Implementation of flood alleviation scheme	Environment Agency	Complete			
			Review residual flood risk from surface water	Environment Agency	Complete			
			Assess capacity of existing drainage infrastructure	Highway Maintenance and Management Partner	Complete	Milestone 1: AMEY to consider extra gullies	Mar-20	Complete
			Assess condition and capacity of sewer network	Severn Trent Water	Complete	Milestone 2: Detailed survey and model verification	May-20	Complete
2018	6	Bournbrook & Selly Park - Selly Park South	Explore the potential for property flood resilience	Environment Agency and Property Owners	On going	Milestone 1: Explore the potential for property flood resilience	Sep-21	On going
2018	7	Bournbrook & Selly Park - The Avenues	Assess condition and capacity of local drainage	Property Owners	Complete	Milestone 1: Advice to residents advising of responsibilities	Dec-19	Complete
			Explore the potential for community scale mitigation	Environment Agency	Complete	Milestone 1: Submit Strategic Outline Business Cases & pursue Local Level funding	Oct-19	Complete
			Assess condition and capacity of sewer network	Severn Trent Water	Complete	Milestone 1: Assess condition and capacity of sewer network		Complete
2018	8	Bournville & Cotteridge - Laburnum Road	Explore the potential for community scale mitigation	Birmingham City Council (LLFA)	Complete	Milestone 1: Site investigation	Mar-20	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy subject to a cost benefit ratio	Jun-20	Complete
2018	9	Brandwood & Kings Heath - Brandwood Cemetery	Assess the condition and capacity of local drainage	Birmingham City Council (Bereavement)	Complete			
			Review of maintenance schedule for local drainage assets	Birmingham City Council (Bereavement)	Complete			
			Explore the potential for community scale mitigation	Birmingham City Council (Bereavement)	Complete	Milestone 1: Identify proposal and funding	Apr-19	Complete
					Complete	Milestone 2: Review funding opportunities and where possible complete the flood mitigation workss	Dec-20	On track
2018	10	Brandwood & Kings Heath - Brandwood Park Road	Explore the potential for community scale mitigation	Birmingham City Council (Housing)	Complete	Milestone 1: Liaison with land owner	Jul-19	Complete
					Complete	Milestone 2: Undertake cost benefit assessment	Dec-19	Complete
					Complete	Milestone 3: Put forward Flood Defence Scheme for grant funding or Local Levy	Mar-20	Complete
			Assess the condition and capacity of highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1:		Complete
			Assess condition and capacity of the watercourse	Birmingham City Council (Leisure)	Complete	Milestone 1: Assess condition of trash screen and watercourse channel	Dec-19	Complete
			Review maintenance regime of the watercourse	Birmingham City Council (Leisure)	Complete	Milestone 1: Establish routine maintenance regime for trash screen	Dec-19	Complete
2018	11	Brandwood & Kings Heath - High Street	Explore the potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 1: Advice to business owners advising measures they can install to protect themselves	Dec-20	Complete
			Assess condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1:		Complete
2018	12	Brandwood & Kings Heath - Newick Grove/Bryndale Avenue	Explore the potential for community scale flood mitigation	Birmingham City Council (LLFA)	Complete			
					Complete			

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
			Assess condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1:		Complete
2018	13	Druids Heath & Monyhull - Bayston Road/Kinsey Grove	Explore the potential for community scale flood mitigation	Birmingham City Council (Leisure)	Complete	Milestone 1: Undertake cost benefit assessment	Mar-20	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy	Apr-20	Complete
2018	14	Druids Heath & Monyhull - Bicknell Croft/Saxelby Close	Explore the potential for catchment wide flood mitigation	Birmingham City Council (LLFA) and Birmingham City Council (Housing)	Complete	Milestone 1: Undertake baseline modelling	Dec-19	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy subject to the findings of the baseline modelling	Mar-20	Complete
2018	16	Druids Heath & Monyhull - Rowcroft Covert	Explore the potential for community scale flood mitigation	Birmingham City Council (Housing) and Birmingham City Council (LLFA)	Complete	Milestone 1: Undertake baseline modelling	Dec-19	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy subject to the findings of the baseline modelling	Jun-20	Complete
			Assess condition and capacity of local drainage	Birmingham City Council (Housing)	Complete			
			Review maintenance schedule of local drainage assets	Birmingham City Council (Housing)	Complete			
2018	17	Druids Heath & Monyhull - Sherstone Covert	Explore the potential for property flood resilience	Birmingham City Council (Housing) and Birmingham City Council (LLFA)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Apr-19	Complete
					Complete	Milestone 2: Review potential to complete work through BCC housing programme	Dec-20	Complete
2018	18	Edgbaston - Barsham Close	Assess condition and capacity of local drainage	Birmingham City Council (Housing)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Apr-19	Complete
					Complete	Milestone 2: Site visit to assess potential for addition local drainage and costs	Dec-19	Complete
			Review maintenance schedule of local drainage assets	Birmingham City Council (Housing)		Milestone 3: Housing to review funding opportunities	Mar-20	Complete
					Complete			
2018	19	Erdington - Spring Lane	Assess condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Undertake CCTV Surveys	Nov-19	Complete
					Complete	Milestone 2: Review existing modelling info and scope up any additional work required	Sep-21	Complete
					Complete	Milestone 3: Assess performance of sewer system	Sep-21	Complete
2018	20	Hall Green South - Brookwood Avenue	Assess condition and capacity of the watercourse	Birmingham City Council (LLFA)	Complete	Milestone 1: De-silt River Cole adjacent to Brockwood Avenue	Oct-19	Complete
2018	21	Harborne - Bourn Brook	Assess condition and capacity of the watercourse	Birmingham City Council (Leisure) and Birmingham City Council (Housing)	Complete			
			Review maintenance regime for the watercourse	Birmingham City Council (Leisure) and Birmingham City Council (Housing)	Complete			
			Explore the potential for catchment wide flood mitigation	Environment Agency, Birmingham City Council (LLFA) and Severn Trent Water	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Jan-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going
2018	22	Harborne - Clarence Road	Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1:		Complete
			Assess the condition and capacity of local drainage	Midland Heart	Complete	Milestone 1:		Complete
			Explore the potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 1: Undertake cost benefit assessment	Dec-19	Complete
					Complete	Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy	Mar-20	Complete
2018	23	Harborne - Mill Farm Road/Cadleigh Gardens/Quinton Road	Assess the condition and capacity of local drainage	Birmingham City Council (Housing)				
			Explore the potential for community scale flood mitigation	Birmingham City Council (Leisure) and Birmingham City Council (LLFA)	Complete	Milestone 1: Incorporate into Upper Bourn Brook study	Dec-19	Complete
			Explore the potential to minimise leaf litter	Birmingham City Council (Housing)	Complete	Milestone 1: Passed to tree officer to review pollarding of tree in Cadleigh Gardens	Dec-19	Complete
			Explore the potential for catchment wide flood mitigation	Environment Agency, Birmingham City Council (LLFA) and Severn Trent Water	Complete	Milestone 1: Develop partnership and identify funding for modelling study	Feb-17	Complete
					Complete	Milestone 2: Integrated modelling to identify mechanism and options	Mar-20	Complete
					On going	Milestone 3: Strategic Outline Business Case	Sep-21	On going
2018	24	Harborne - Weather Oaks	Assess the condition and capacity of local drainage	Private Road Owner via management company MetroPM	Complete			

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
			Review of maintenance regime schedule of local drainage assets	Private Road Owner via management company MetroPM	Complete			
			Explore the potential to minimise leaf litter	Private Road Owner via management company MetroPM	Complete			
			Assess the condition and capacity of local drainage	Birmingham City Council (Housing)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Apr-19	Complete
						Milestone 2: Site visit to assess potential for addition local drainage and costs	Jun-19	Complete
						Milestone 3: Put forward Flood Defence Scheme for grant funding or Local Levy	Aug-19	Complete
			2018	25	Highters Heath - Arundel Road	Assess the capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete
Explore the potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete				Milestone 1: Undertake cost benefit assessment	Sep-19	Complete
						Milestone 2: Put forward Flood Defence Scheme for grant funding or Local Levy	Sep-19	Complete
2018	26	Highters Heath - Henlow Road/Sladepool Road	Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1:	Dec-20	Complete
			Explore the potential for property flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 1: Undertake cost benefit assessment in conjunction with community scale flood mitigation assessment	Dec-19	Complete
			Explore the potential for community scale flood mitigation	Birmingham City Council (Leisure)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Leisure to discuss issues	May-19	Complete
						Milestone 2: Put forward Local Levy bid for modelling study	Jun-19	Complete
						Milestone 3: Secure Local Levy funding for modelling study	Jul-19	Complete
					Complete	Milestone 3: Undertake modelling study	Jan-20	Complete
2018	27	Highters Heath - Mountford Close	Review maintenance schedule of highway assets	Highway Maintenance and Management Partner	Complete	Milestone 1:	Dec-20	Complete
			Assess condition and capacity of local drainage	Birmingham City Council (housing)	Complete	Milestone 1: Clearance of blocked gullies	Oct-19	Complete
2018	28	Highters Heath - Warstock Road	Assess the condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Assess performance of sewer system	Sep-21	Complete
2018	29	Moseley - Moor Green	Assess the condition and capacity of the highway drainage network	Highway Maintenance and Management Partner	Complete	Milestone 1: AMEY to assess the viability on an extra gully or soakaway	Sep-21	Complete
			Explore the potential for community scale flood mitigation	Birmingham City Council (Leisure)	Complete	Milestone 1: Identify scope for detailed modelling and assessment	Dec-19	Complete
					Complete	Milestone 2: Bid for funding from Local Levy for detailed modelling and assessment	Mar-20	Complete
					Complete	Milestone 3: Secure Local Levy funding for modelling study	Jul-19	Complete
					Complete	Milestone 3: Undertake modelling study	Jan-20	Complete
2018	30	North Edgbaston - Wadhurst Road	Planning to agree a way forward with developers	Birmingham City Council (Planning) and Avery Fields Community Sports Trust	Complete	Milestone 1: Construct bund to intercept overland flows	Jul-18	Complete
						Milestone 2: Infiltration testing to determine soakaway potential at site	May-19	Complete
					Complete	Milestone 3: Consultation with Severn Trent Water to agree discharge of drainage to public sewer	Oct-19	Complete
					complete	Milestone 4: Submit revised drainage strategy to planning for approval	Nov-19	Complete
2018	32	Pype Hayes - Tyburn	Review maintenance regime for the watercourse	Birmingham City Council (Leisure) and Birmingham City Council (LLFA)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Allotments to discuss issues	Sep-19	Complete
			Explore the potential for property level flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 2: Advice to business owners advising measures they can install to protect themselves	Dec-19	Complete
2018	33	Quinton - Amersham Close	Assess the condition and capacity of the local drainage	Birmingham City Council (Housing)				
			Explore the potential for community scale flood mitigation	Birmingham City Council (Housing)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Housing to discuss issues	Apr-19	Complete
					Complete	Milestone 2: Site visit to assess potential for additional local drainage and costs	Dec-19	Complete
					Complete	Milestone 3: Housing to review funding opportunities	Mar-20	Complete
2018	34	Sparkhill	Explore the potential for catchment wide flood mitigation	Environment Agency, Birmingham City Council, Solihull Metropolitan Borough Council and Worcestershire County Council	Complete	Milestone 1: Undertaken post flooding survey to inform potential schemes	Mar-19	Complete
					Complete	Milestone 2: Assessment of options for future programme 2021 onwards	Oct-19	Complete
					Complete	Milestone 3: Assess the operational/capacity of the pumps	Dec-19	Complete

Year	Site Ref	Location	Recommended Actions	Identified Party / RMA	Overall Status	Milestone	Target Date (end of)	Status
						Milestone 4: Asset protection team (N.Lote) to report back on optioneering	Sep-21	On going
					Complete	Milestone 5: Confirm when the river flow monitor is installed at Formans Rd		Complete
					Complete	Milestone 6: EA provide records of flooding to BCC for inclusion on their register		Complete
					Complete	Milestone 7: EA to provide feedback on Community Engagement Pathfinder		Complete
2018	35	Stirchley - Dell Road	Assess the condition and capacity of the sewer network	Severn Trent Water and Birmingham City Council (LLFA)	Complete	Milestone 1: Undertake survey and site inspection	Aug-19	Complete
					Complete	Milestone 2: Review existing modelling info and scope up any additional work required	Sep-21	Complete
					Complete	Milestone 3: Assess performance of sewer system	Sep-21	Complete
2018	36	Stirchley - Pitcairn Close	Explore the potential for community scale flood mitigation	Birmingham City Council (LLFA)	Complete	Milestone 1: Site Investigation	Jun-19	Complete
					Complete	Milestone 2: Submit Business Case	Aug-19	Complete
					Complete	Milestone 3: Deliver community scale mitigation scheme on site	Mar-20	Complete
2018	37	Sutton Trinity - Wyndley Lane	Review maintenance schedule of highway assets	Leisure Centre Management	Complete			
2018	38	Sutton Vesey - Boldmere Road and Wakefield Close	Assess condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Pre-feasibility study to be commissioned and completed	Mar-19	Complete
					On going	Milestone 2: Assess condition and capacity of the sewer network	Sep-21	On going
			Assess condition and capacity of local drainage	Highway Maintenance and Management Partner	Complete	Milestone 1:		Complete
2018	39	Druids Heath & Monyhull - Chanston Avenue	Explore the potential for community scale mitigation	Birmingham City Council (Bereavement)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Bereavement to discuss issues	Dec-19	Complete
			Explore the potential for property level flood resilience	Birmingham City Council (LLFA) and Property Owners	Complete	Milestone 1: Meeting between BCC LLFA and property owner	Dec-19	Complete
			Assess condition and capacity of the sewer network	Severn Trent Water	Complete	Milestone 1: Assess performance of sewer system	Mar-20	Complete
2018	40	Druids Heath & Monyhull - Marsham Road	Assess condition and capacity of local drainage	Highway Maintenance and Management Partner	Complete	Milestone 1: Assess condition and capacity of local drainage	Mar-20	Complete
2018	41	Hall Green - Sarehole Road	Assess condition and capacity of the watercourse	Birmingham City Council (Leisure)	Complete	Milestone 1: Meeting between BCC LLFA & BCC Leisure to discuss issues	Aug-19	Complete
					Complete	Milestone 2: Undertake localised desilting work to River Cole	Dec-19	Complete



Sustainability & Transport O&S Committee: Work Programme 2021/22

Chair:	Cllr Liz Clements
Deputy Chair:	Cllr Julie Johnson-White
Committee Members:	Cllrs Zaker Choudhry, Mohammed Fazal, Eddie Freeman, Timothy Huxtable, Mike Leddy and Hendrina Quinnen.
Officer Support:	Ceri Saunders, Acting Group Overview & Scrutiny Manager (303 2786) Scrutiny Officer: Baseema Begum (303 1668) Committee Manager: Louisa Nisbett (303 9844)

1 Meeting Schedule

Date	What	Officer Contact / Attendees
9th June 2021 (informal) 1400 hours Online meeting Report Deadline: 1 st June	To discuss priorities for the 2021/22 work programme.	Scrutiny Office
7th July 2021 1400 hours BMI Main Hall Report Deadline: 28 th June	Cabinet Member for Transport & Environment – Annual Report & Priorities	Rose Horsfall, Cabinet Support Officer
22nd September 2021 (informal) 1400 hours Online meeting Report Deadline: 13 th Sept	Birmingham Tree Policy Inquiry – Tracking West Midlands Local Transport Plan Consultation E-scooters briefing	Simon Needle, Principal Arboriculturist David Harris and Alex Greatholder, Transport for West Midlands (TfWM) Ioanna Moscholidou and Kurt Sullivan Inclusive Growth Directorate



Date	What	Officer Contact / Attendees
20th October 2021 1400 hours BMI Main Hall Report Deadline: 11 th Oct	Restoring confidence in public transport	Transport for West Midlands; West Midlands Metro; National Express West Midlands; West Midlands Trains
17th November 2021 (informal) 1400 hours Online meeting Report Deadline: 8 th Nov	Plastic Free Birmingham – Tracking Waste Disposal Procurement - update Priorities for the in-house Climate Change team Disinvestment in fossil fuels – Follow up on Motion to City Council with West Midlands Pension Fund representatives	Cllr John O'Shea, Cabinet Member for Street Scene and Parks and Darren Share, Assistant Director, Street Scene and Parks Cllr John O'Shea, Cabinet Member for Street Scene and Parks Darren Share, Assistant Director, Street Scene and Parks Michelle Climer, Contracts Manager Ellie Horwitch-Smith, Assistant Director Route to Zero Carbon Rachel Brothwood, Director of Pensions and Simon Taylor, Assistant Director – Pensions, West Midlands Pension Fund
15th December 2021 (informal) 1400 hours Online meeting Report Deadline: 6 th Dec	Highways PFI Programme Maintenance update Car Free School Streets Pilot Scheme – A review of the pilot completed in March 2021 and future proposals City-Wide Electric Vehicle (EV) Charge Point Strategy	Kevin Hicks, Assistant Director, Highways & Infrastructure and Kamyar Tavassoli, Highways Services Manager Peter Edwards, Travel Demand Manager Sylvia Broadley, Specialist Energy Manager
19th January 2022 (informal) 1400 hours Online meeting Report Deadline: 10 th Jan	Update on progress made with the development of the Clean Air Strategy Highways Management & Maintenance PFI contract - Update	Mark Wolstencroft, Operations Manager, Environmental Protection Kevin Hicks, Assistant Director, Highways & Infrastructure and Domenic De Bechi, PFI Contract Manager



Date	What	Officer Contact / Attendees
16th February 2022 1400 hours Committee Room C, Council House Extension, Margaret Street Report Deadline: 7 th Feb	Cabinet Member for Transport & Environment – Annual Report	Rose Horsfall, Cabinet Support Officer
16th March 2022 1400 hours Committee Room C, Council House Extension, Margaret Street Report Deadline: 7 th March	West Midlands Local Transport Plan (LTP) 5 Core Strategy consultation Clean Air Zone baseline data – Discussion on findings Transportation & Highways Capital Programme 2022/23 to 2027/28 Flood Risk Management Annual Report	David Harris, Transport Strategy and Place Manager TfWM Adam Tranter, West Midlands Cycling & Walking Commissioner Steven Arnold, Head of CAZ Phil Edwards, Assistant Director, Transport & Connectivity and Rachel Telfer, Transport Planning and Investment Manager Hannah Hogan, Flood Risk Manager
18th May 2022 1400 hours TBC Report Deadline: 9 th May	TBC	

2 Outstanding Tracking

Inquiry	Outstanding Recommendations	Last Tracking
Birmingham Tree Policy Inquiry	R07	September 2021
Plastic Free Birmingham	R01, R02, R05, R06 & R07	November 2021

3 Further work areas of interest/Work to be programmed

3.1 The following items could be scheduled into the work programme if members wish to investigate further:

- Improving the public realm to aid the cycling and walking offer and using the sustainability agenda to green-up areas including an update on the City of Nature Vision for Birmingham.



- DFT Active Travel Fund update including an update on e-scooters, West Midlands Bike Scheme, Places for People and Low Traffic Neighbourhoods (LTNs).
- Commonwealth Games (CWG) Sustainability Pledge (TBC)
- The West Midlands Combined Authority Transport Delivery Committee's work on Bus Strategy.
- Environmental, Public Open Space and Transport Issues within City Council Masterplans (i.e. Smithfield) and Urban Regeneration Frameworks.
- To continue to receive regular updates on the Waste Disposal Procurement Process from Cllr O'Shea, Cabinet Member for Street Scene and Parks.
- Clean Air Zone – Operational update (TBC)
- Public Highway issues: Parking/Grass verges/pavement parking – (information from previous sessions to be circulated to members when available).
- Update on the Birmingham Transport Plan as part of the Cabinet Member for Transport & Environment's annual update

4 Other Meetings

Call in Meetings

*None
scheduled*

Petitions

*None
scheduled*

Councillor Call for Action requests

*None
scheduled*

It is suggested that the Committee approve Wednesday at 1400 hours as a suitable day and time each week for any additional meetings required to consider 'requests for call in' which may be lodged in respect of Executive decisions.

Contact Officers

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Baseema Begum, Research & Policy Officer, baseema.begum@birmingham.gov.uk – 0121 303 1668



5 Forward Plan for Cabinet Decisions

The following decisions, extracted from the Cabinet Office Forward Plan of Decisions, are likely to be relevant to the Sustainability & Transport O&S Committee's remit. **Please note this is correct at the time of publication.**

Reference	Title	Portfolio	Proposed Date of Decision
009951/2022	Payments of the £150 Government Energy Grants	Deputy Leader	22 Mar 2022
009142/2021	A457 Dudley Road Improvement Scheme – Revised Main Scheme Full Business Case	Transport & Environment	22 Mar 2022
009593/2022	Transportation & Highways Capital Programme 2022/23 to 2027/28	Transport & Environment	22 Mar 2022
009840/2022	Transport & Environment CAZ Funded Projects	Transport & Environment	22 Mar 2022
009854/2022	Use of Clean Air Zone revenues – creation of a clean air fund for Birmingham	Transport & Environment	22 Mar 2022
009086/2021	BCC Streetworks Permit Scheme	Transport & Environment	26 Apr 2022
009445/2022	City Centre Public Realm Improvement Scheme (CCPR) Full Business Case (FBC) phase 2	Transport & Environment	26 Apr 2022
009716/2022	HS2 Curzon Station Enhanced Public Realm Project – FBC	Transport & Environment	26 Apr 2022
009999/2022	Net Zero Neighbourhood Plan	Transport & Environment	26 Apr 2022
009213/2021	BMHT Dawberry Fields Road, Passivhaus Development	Homes & Neighbourhoods	17 May 2022
008965/2021	Renewal of Building Energy Management Systems	Leader	17 May 2022
009892/2022	The Birmingham Plan Issues and Options	Leader	17 May 2022
009249/2021	Street Naming and Numbering Policy Revision	Transport & Environment	17 May 2022
009998/2022	Enhanced Partnership for Birmingham City Centre	Transport & Environment	17 May 2022
009767/2022	Whole House Retrofit Pilot	Homes & Neighbourhoods	28 Jun 2022
007686/2020	Historic Environment Supplementary Planning Document	Leader	28 Jun 2022
008531/2021	Highways and Infrastructure: Footway Crossings Policy and Information for Applicants	Transport & Environment	28 Jun 2022

