



# The Greater Bristol Bus Network Showcase routes

Summary June 2014

travelwest+

Bath & North East Somerset, Bristol, North Somerset and South Gloucestershire  
Councils working together to improve your local transport





“ The area needs a public transport network that is part of daily life and allows people to use public transport as a default choice

Research shows that transport is a major barrier to economic growth in the West of England

National research shows that major transport schemes have the potential to unlock large numbers of new jobs and economic output

The West of England transport schemes have been developed to focus on the most crucial transport problems in the West of England. They will deliver a combination of more attractive public transport services, reduced needs to travel by car and faster and more reliable journeys for all users of the transport network.

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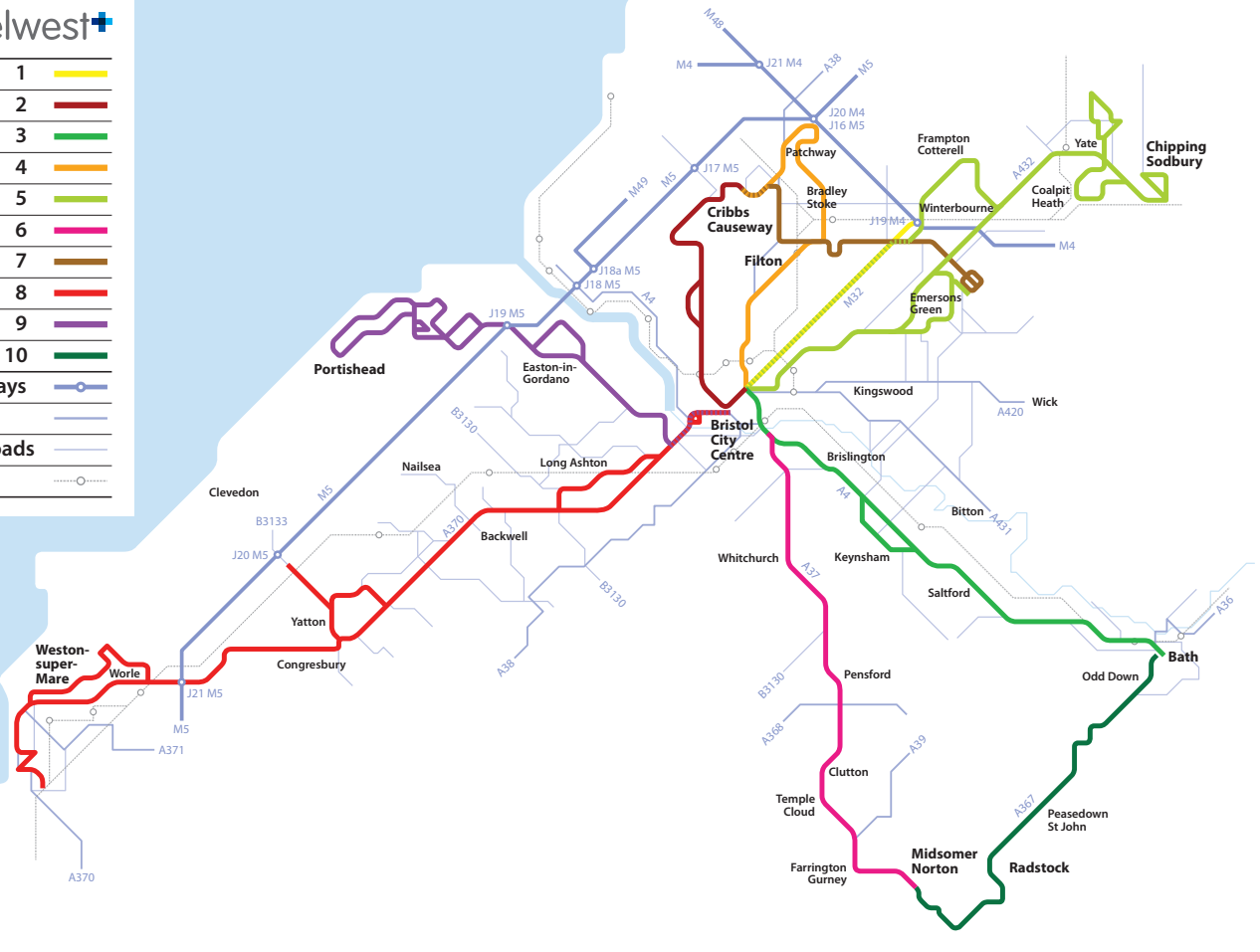
*From 'Unlocking Our Potential: The Economic Benefits of Transport Investment in the West of England' Atkins and the West of England Authorities, November 2012*

#### Has GBBN met its targets?

- ✓ Bus patronage
- ✓ Park and ride patronage
- ✓ Bus user satisfaction
- ✓ Bus punctuality
- ✓ Rail patronage
- ✓ Area wide traffic levels
- ✓ Congestion
- ✓ Air quality
- ✓ Number of cycling trips
- ✓ Road safety



Corridor 1	
Corridor 2	
Corridor 3	
Corridor 4	
Corridor 5	
Corridor 6	
Corridor 7	
Corridor 8	
Corridor 9	
Corridor 10	
Motorways	
A-roads	
Minor roads	
Rail line	



The Greater Bristol Bus Network was developed by the four West of England Local Authorities and local bus operator First, to improve 10 strategic routes with key outcomes to improve and upgrade the bus network infrastructure and enhance bus passenger experience with better buses and improved information and reliability; helping to reduce congestion and carbon emissions.

The five partners worked together to identify key congestion hotspots for improvements and to deliver substantial improvement to the speed, quality, reliability and attractiveness of bus services on the 10 showcase routes.

The investment in the bus network is one part of an integrated approach to transport investment within the West of England, with

each part of the investment adding to the whole so that the changes become greater than the sum of the parts.

These additional projects were seen as a building block for further investment via other funding streams such as the Local Sustainable Transport Fund, Better Bus Area, Cycling City, and the Cycling Ambition Fund.

The Joint Local Transport Plan 3 Vision for “an affordable, low carbon, accessible, integrated, efficient and reliable transport network to achieve a more competitive economy and better connected, more active and healthy communities,” set the scene for:

- the Greater Bristol Bus Network, (£91m in total)
- Cycling City (£23m) and more recently
- Cycle Ambition Funding (£11m),
- Local Sustainable Transport Funding (£40m)
- Better Bus Area funding (£8m)
- the investment in the Weston Package (£15m),
- the Bath Transportation Package (£27m),
- the three MetroBus routes (£200m),
- and the planned MetroWest rail improvements (at least £100m).

Find out more at [www.travelwest.info/projects](http://www.travelwest.info/projects)

Each project provides an opportunity for change that together adds up to a big difference.



## The Project

The Greater Bristol Bus Network recognises the vital role that bus services must play as the backbone of cost effective urban public transport systems. The delivery of bus network enhancements can only be achieved in partnership between bus operators and local authorities.

The councils, working in partnership with bus operator First, brought 10 key routes up to showcase standard with

- Over 120 new buses
- Nearly 1,000 improved bus stops - new shelters, new information panels, level access
- More than 300 new real time information displays
- New bus priority signals at junctions that turn green when buses approach helping them stay on time

- Bus priority lanes allowing buses to bypass general traffic
- Improvements to pedestrian and cycle access and safety
- Road widening in key traffic hot spots
- Tree planting and public realm/ environmental improvements in local areas

The initial £80 million investment in GBBN comprised £42.3 million of grant funding from the Department for Transport, a contribution of £22.5 million from FirstGroup and a local and developer contribution of £15.2 million.

As the project progressed, the West of England authorities allocated additional funds for work above and beyond what was initially planned with a total of £91 million being invested in the West of England bus network.

Buses are vital. Without them, workers wouldn't get to work, young people wouldn't get to school and college, and some of the most vulnerable people in society would become isolated from friends and family.

Every year we make around 5 billion bus and coach journeys - that's three times more journeys than are made by train. If you've ever sat in a traffic jam in rush hour, just imagine how bad it would be if all those bus loads of people took a car instead.

It's no exaggeration to say that without buses, many towns and cities would grind to a halt.

That's why it's vital for bus services to meet passenger expectations.

Bus Users UK - the voice of passengers [www.bususers.org](http://www.bususers.org)



“Please congratulate the person or team responsible for the alterations currently being carried out on Whiteladies Road. The wider pavements and the improved pedestrian crossings feel much safer. The trees planted in the central beds are a tremendous improvement to the urban landscape, and that’s even before they show any leaves! I also appreciate how the traffic speed has been calmed and vehicles now flow along nicely at a maximum speed of 30 mph, which is safer for everyone.”

Mr Small, Clifton

## Working together

Working in partnership with local bus companies, each authority delivered schemes specific to their local area; such as bus stops and bus lanes. However for cross cutting projects such as real time information and communications, one lead authority was nominated, with all partners involved to ensure

a consistent approach across the network.

A formal structure with project managers, a programme board and specific leads for key areas such as real time information and communication established rigorous governance and ensured delivery.

## Case Study: Corridor 2 - A4018 Whiteladies Road Environmental Improvements

The GBBN measures for the Whiteladies Road part of corridor 2 include:

- bus stop, shelter, kerb, and information improvements (seen on all 10 GBBN corridors);
- new northbound bus lanes;
- clearly defined parking and loading bays;
- planters and better pedestrian crossing facilities; and
- new traffic signals at the Blackboy Hill gyratory and the St Pauls Road junction, with selective vehicle detection (SVD) for late running buses.

As part of the improvements for Whiteladies Road, the parking in the inter-peak outside the hours of bus lane operation was made limited time only, which again encouraged turnover of occupancy of the spaces, making it easier to park for access to shops and businesses.

In 2013, the Whiteladies Road bus corridor received a Civic Society environmental award 2013.

This contributed to a 40.9% rise in patronage on this corridor.

**Before:**



**After:**





## Infrastructure

There has been considerable investment in the local highway to improve the reliability of buses. General road widening, and cycling and pedestrian improvements were also delivered to maximise benefits to all road users.

In Filton, near key major employers such as Ministry of Defence, Hewlett Packard and the University of the West of England, there have been a number of improvements

including widening the roundabout for a new bus lane to allow buses, taxis and motorcycles to travel unhindered through the area, reducing journey times. Improved cycling and walking facilities and priority vehicle lanes on the ring road for buses, car sharers, taxis, motorcyclists and heavy goods vehicles to assist in reducing carbon emissions and congestion.

On the A4 approach to Bristol, adjacent to the Brislington park and ride an additional traffic lane has already brought improvements to traffic flow. The road on the west bound approach to M5 junction 21 was widened to include a peak hours bus lane to reduce delays along with a new east bound cycle lane.

## Case Study: Corridor 9 - A369 Portishead to Bristol Bus Service Enhancements

The GBBN improvements on corridor 9 include:

- lane widening and new traffic signals at the A369 / M5 junction 19 approaches in both directions;
- a new westbound HOV lane at Martcombe Road;
- new signals at the St Georges Hill junction to enable buses to leave Pill and access the A369;

- the traffic signals were also refurbished at both the Abbots Leigh Road and Bridge Valley Road junctions; and
- all traffic signals have SVD for late running buses.

Helped by the GBBN improvements to speed up buses along this corridor and also as part of LSTF 'kick-start' funding, First simplified three routes into two services X2 and

X3, and doubled the previous joint frequency from 2 buses/hr to 4 buses/hr along many parts of the routes.

Buses were rebranded into the 'Express Yourself' livery, and buses with leather seats and free wi-fi were provided.

This contributed to a 52.2% rise in patronage on this corridor.



## Real Time Information

Real time information provides bus users with the benefit of knowing exactly when the buses will turn up. Buses on key routes have been fitted with tracking devices which relay information to a website and information panels on shelters giving customers the time in minutes to when the bus is expected to arrive.

Providing accurate information about the arrival of services at their stop, real time information removes the uncertainty a passenger can feel when waiting at the bus stop. Information can be accessed via mobile phone, the internet and at more than 300 new displays at key locations giving up to the minute information at the bus stop.

The West of England authorities have developed a bus checker app that provides live and scheduled bus times for every stop in the West of England, helping people plan their journey more easily. Download from [www.travelwest.info](http://www.travelwest.info)

## Case Study: Corridor 8 - Bristol to Weston-super-Mare Patronage growth

The GBN improvements on corridor 8 include:

- Junction improvements at Locking Road / New Bristol Road;
- New bus lane at M5 J21 westbound approach;
- New bus lane and junction improvements at Congresbury including traffic signals with SVD;

- Improvements at Cumberland Basin including SVD.

The enhanced X1 service provided in Phase 1 of the LSTF WEST saw an increase in patronage of 14.2% between the financial years 2011/12 and 2012/13. These enhancements also saw newer, higher quality and re-branded vehicles on the route. This service saw an increase in patronage of 27.7% between 2011/12 and 2013/14.





## New buses and shelters

As part of GBBN, First invested over £22m in 120 new buses spread out across the showcase route network. Each bus can accommodate over 70 seated passengers including space for a wheelchair. Each vehicle has integral CCTV fitted for enhanced passenger safety and low floors with 'kneeling entrances' to

aid those with restricted mobility. They are also fitted with manual ramps for disabled access.

First have worked with the local authorities to offer discounts and promotions as the routes have launched in order to encourage greater bus use.

Almost 1,000 bus stops across the 10 routes have been improved with raised kerbs to improve accessibility, new shelters with improved seating and large information displays.

## Case Study: Corridor 6 - A37 Wells Road Corridor Improvements

GBBN improvements on corridor 6 include:

- Improvements to the Staunton Lane traffic signals;
- Bus lanes and junction improvements - Haverstock Road to Three Lamps; and
- SVD on traffic signals.

Bus stops were improved along the GBBN corridors, including new raised kerbs for easier access to the buses, new paving with contrasting colours, and many bus stops had new shelters, real-time information, and lighting. Bus stops were also reviewed for waiting / loading restrictions, and where required, coloured surfacing was used to indicate the bus 'box'.

This contributed to a 26% rise in patronage on this corridor.

Before:



After:





## Marketing and promotion

Working under the TravelWest+ brand, developed by the four authorities for joint transport activities, local residents and businesses were consulted during the improvements to ensure they reflected their needs as well as those of the travelling public.

Official launches were held as the individual routes were completed.

These involved a targeted mix of press coverage, local advertising campaigns and incentives. All were aimed at raising awareness of the improvements to the local bus network and to encourage people to try the bus. A major promotional activity - the super shelter trail - drew together the completion of the 10 showcase routes.

Along the 10 showcase routes, 40 bus shelters in the West of England were dressed to highlight the local area and its attractions. Four special shelters had additional dressing setting people a challenge to find the Duck Race, the sculptured shelter, Shop 'till you drop' and Brunel's most famous ship.

## Case Study: Corridor 5 - Yate network improvements

All of the following commercial services operated by First commenced in April 2014:

- A new commercial service X46 between Bristol and Yate by First. This is in addition to the previously supported X27 which Wessex now operates commercially (corridors 1, 5)

- The previous supported Service 689 (Yate - Pucklechurch - Bristol) was replaced with a new commercial X49 service (corridors 1, 5)
- New commercial service 81 (Yate - Bristol Parkway - Kingswood) has replaced the previous supported 581 (corridor 4, 7)

In Yate, RTI and new shelters were introduced as part of GBBN. The switch from supported to commercial services demonstrates the success of bus services using the GBBN corridors.

This contributed to 24.2% rise in patronage on Corridors 1 and 5.



## Case Study: Corridor 2 - A4018 Westbury Road Post-scheme monitoring and feedback

Monitoring of the success of measures introduced was an important part of the GBBN. Very few changes were required, but an example where feedback and further analysis promoted a change is the Westbury Road bus lane on corridor 2. Here it was noted that the high number of

turning vehicles at the White Tree roundabout was causing a queue to build back beyond the start of the bus lane and was therefore delaying buses before they could reach the bus lane. By extending the gap between the end of the bus lane and the roundabout, more turning vehicles could

be accommodated, reducing the overall queue length, and speeding up buses and all road users.

This contributed to a 40.9% rise in patronage on this corridor.

## Case Study: Corridors 8 and 9 Bus stop infrastructure enhancements

The Anchor Road southbound bus stop (to Portishead, Long Ashton, Clevedon and Weston-super-Mare) is one of the busiest bus stops in central Bristol in terms of number of passengers boarding. It is also one of the more high profile stops, being close to 'At Bristol', the Harbourside, and the Cathedral. As part of the GBBN, the two small existing bus shelters were replaced with one very long 'super shelter', complete with

a 12-line RTI display, giving passengers much more space to wait and much better weather protection. The use of a single stop also enables buses to arrive in turn for boarding, rather than previously having to cut in front of the bus at the other bus stop, which caused delays and frustration to all road users.

This contributed to a 17.3% rise in patronage on Corridor 8 and a rise of 52.2% on Corridor 9.

Before:



After:



Local people and local business need and deserve a transport system

- that recognises the whole journey. Where cycle routes and footways feed in to the public transport network;
- where both bus and rail play their part. Where buses serve the movements around and within towns, cities and rural communities. Where rail serves both short and longer journeys;
- where marketing, through ticketing, timetable coordination and interchanges make public transport more desirable than the private car;
- where customer satisfaction is the driver behind encouraging public transport use;
- whilst recognising the car will still provide personal mobility for many.

### How has the Greater Bristol Bus Network investment helped to achieve this?

- ✓ **Bus patronage** - GBBN target met and exceeded.
- ✓ **Park and ride patronage** - GBBN target met and exceeded.
- ✓ **Bus user satisfaction** - GBBN target met and exceeded.
- ✓ **Bus punctuality** - GBBN target met and exceeded.
- ✓ **Rail patronage** - GBBN target met and exceeded.
- ✓ **Area wide traffic levels** - GBBN target met and exceeded.
- ✓ **Congestion** - GBBN targets largely met.
- ✓ **Air quality** - GBBN target met and exceeded.
- ✓ **Number of cycling trips** - GBBN target met.
- ✓ **Road safety** - GBBN targets met and exceeded.

### The overall quality of the bus service

This is considered by Passenger Focus to be the key indicator of bus user satisfaction.

The percentage of passengers satisfied with the overall quality of the bus service as an average in 2007 was **46%**. This rose to **73%** in 2011/12.

### Passenger numbers

Taken as an average for the GBBN corridors overall, the target to increase the number of passengers has been exceeded.

First buses have seen a growth of 17.6% between 2008/09 and 2013/14 on their main services that serve the GBBN corridors.

### Park and ride patronage

The total number of passengers using the B&NES and BCC park and rides in 2013/14 is **2.597M** which is **6.58%** above the GBBN target of **2.437M**.

### Bus user satisfaction

The GBBN set a target of increasing the percentage of bus user satisfaction from a baseline of **38%**, to a target of **60%**. In 2011/12 satisfaction levels of **73%** for the overall quality of the bus service were measured.



### Whether buses arrive on time

For satisfaction with whether buses arrive on time, the average in 2007 was **41%**. This rose to **66%** 2011/12.

### The frequency of the buses

For satisfaction with frequency of the buses, the average in 2007 was **44%**. This rose to **70%** in 2011/12.

### The journey time to your destination

For satisfaction with the journey time to your destination, the average percentage satisfaction in 2007 was **52%**. This rose to **81%** in 2011/12.

### How easy buses are to get on and off

For satisfaction with how easy buses are to get on and off, the average in 2007 was **62%**. This rose to **89%** in 2011/12.

### The quality of the bus stops and shelters

For satisfaction with the quality of the bus stops and shelters, the average in 2007 was **46%**. This rose to **78%** in 2011/12.

### The availability of timetable and route information

For satisfaction with the availability of timetable and route information, the average in 2007 was **44%**. This rose to **75%** in 2011/12.

### Bus punctuality

There have been significant overall improvements in punctuality. RTI data has been used to measure punctuality across specific bus services that cover the GBBN corridors to the greatest extent. This shows:

The average percentage of buses starting their journey on time in 2013 was **91.7%**. This is above the 2008 average of **78.6%**.

The average percentage of buses keeping on time during their journey in 2013 was **80.0%**. This is above the 2008 average of **73.6%**.

Bus services are often a crucial part of the local community – especially (but not exclusively) for young, elderly, and disabled passengers who often have no alternative transport options.

#### Passenger Focus

[www.passengerfocus.org.uk](http://www.passengerfocus.org.uk)

## Case Study: Corridor 3 - A4 Bath Road Consultation support

Due to the high levels of traffic heading towards Bath and Keynsham along the A4 in Brislington throughout the day, the conversion of the existing peak-time only bus lane to 24 hour operation was necessary to improve reliability of buses.

During the consultation, this measure was supported by the local traders as the scheme design enabled parking bays to be provided on the inside of the bus lane.

These could be used 24 hours a day unlike the previous off-peak only parking, and were made limited time to encourage turnover of spaces for the benefit of customers for the shops and businesses in Brislington Hill.



### Rail Patronage

GBBN also set out to increase the number of passengers who travelled by rail, this has happened.

The rail passenger growth has been driven by many other factors other than the GBBN investment; however by making it easier to transfer between bus and rail the GBBN has positively contributed to this growth.

### Congestion

In overall terms traffic growth across the West of England has been restricted to below GBBN target levels. Journey times are under the target in some surveys, but results vary according to the time of day and the month of the survey. Therefore the target for restricting the increase in journey times along GBBN corridors has largely been met.

## Case Study: Corridor 7 - A4174 Ring Road Cycle Facilities

GBBN Corridor 7 serves the northern and eastern edge of the Bristol urban area. It serves the important development sites around Filton, Stoke Gifford and Harry Stoke and links to the development of Emersons Green. Several measures were introduced to facilitate pedestrian and cycle movements along the corridor:

- Measures along the line of the A4174 to complete the cycle route (i.e. widening of footway between Filton Avenue and Abbey Wood roundabout)
- Three toucan crossings in the vicinity of the re-modelled Abbey Wood junction

Two cycle ATC counters are located in the vicinity of Corridor 7. These have recorded significant growth in cycle usage since 2007. Average daily cycle flows at both sites are now recording over 100 more cycles per day compared to 2007.

This contributed to a 14.6% rise in patronage on Corridors 4 and 7.



### Air Quality

The Joint Local Transport Plan 3 2012/13 Progress Report notes that air quality in the Bristol Air Quality Management Area improved during 2012 compared to the previous year with a fall in the average level of nitrogen dioxide to 43 µg/m<sup>3</sup>.

### Cycling

The quality of cycling infrastructure across the West of England has seen improvements from a number of cycling focussed investment programmes. GBBN set out to provide benefits to cyclists where practical and to increase cycle usage by **40%**. This target has been met.

### Road Safety

In terms of the GBBN corridors, as the total numbers are small, care has to be taken not to read too much into one corridor and /or for one year only. However a three year rolling average across corridors shows road safety has improved on the GBBN corridors.

## Case Study: Corridor 10 - A367 Midsomer Norton to Bath Patronage growth - Somerbus

The GBBN improvements on corridor 10 include:

- a northbound bus lane at Odd Down;
- a southbound bus lane between Midford Road and the Red Lion;
- a northbound bus lane and bus gate at Wellsway Lower;

- a northbound bus lane at Bear Flat.

For the Somerbus service 175 patronage grew 9% in 2012 from 2011, and grew by a further 16.5% in 2013, making a total increase in 2013 from 2011 of 27.0%. The first quarter of 2014 has also seen a 19.6% increase in passengers over the same period in 2013.

Somerbus have not raised their fares in the last 4 years, and instead say they have relied on patronage growth for improved revenues.

From April 2014 Somerbus have also added an additional early morning peak time journey to provide additional capacity.

## The Greater Bristol Bus Network Showcase routes

- 120 new buses, at a total cost of £22.5 million, were put on the road;
- Nearly 1,000 bus stops were improved with new shelters, new information panels and level access added;
- More than 300 new real time information displays were added to bus stop locations around the region;
- New bus priority signals were installed at various junctions throughout the region, which automatically turn green when buses approach helping them stay on time;
- More bus priority lanes were established, in the right places, allowing buses to bypass general traffic;
- Improvements were made to pedestrian and cycle access and safety;
- Road were widened in key traffic hot spots; and
- Tree planting and environmental improvements were made where needed.
- Quality partnership schemes on all the GBBN corridors were also introduced to ensure that operators and councils continue to work together to maintain a high standard of bus services and associated facilities over the next five years.
- A customer promise was introduced by First, guaranteeing customers a refund in travel vouchers or tickets, if their bus is more than one minute early, or 20 minutes late, at any timing point.

On-going investment in the bus network, cycling and pedestrian improvements and integration between buses, cycles, cars and trains continues to reduce congestion, improve air quality and help people get to work, education and leisure facilities around the West of England.