

West Midlands Key Route Network

East of Coventry

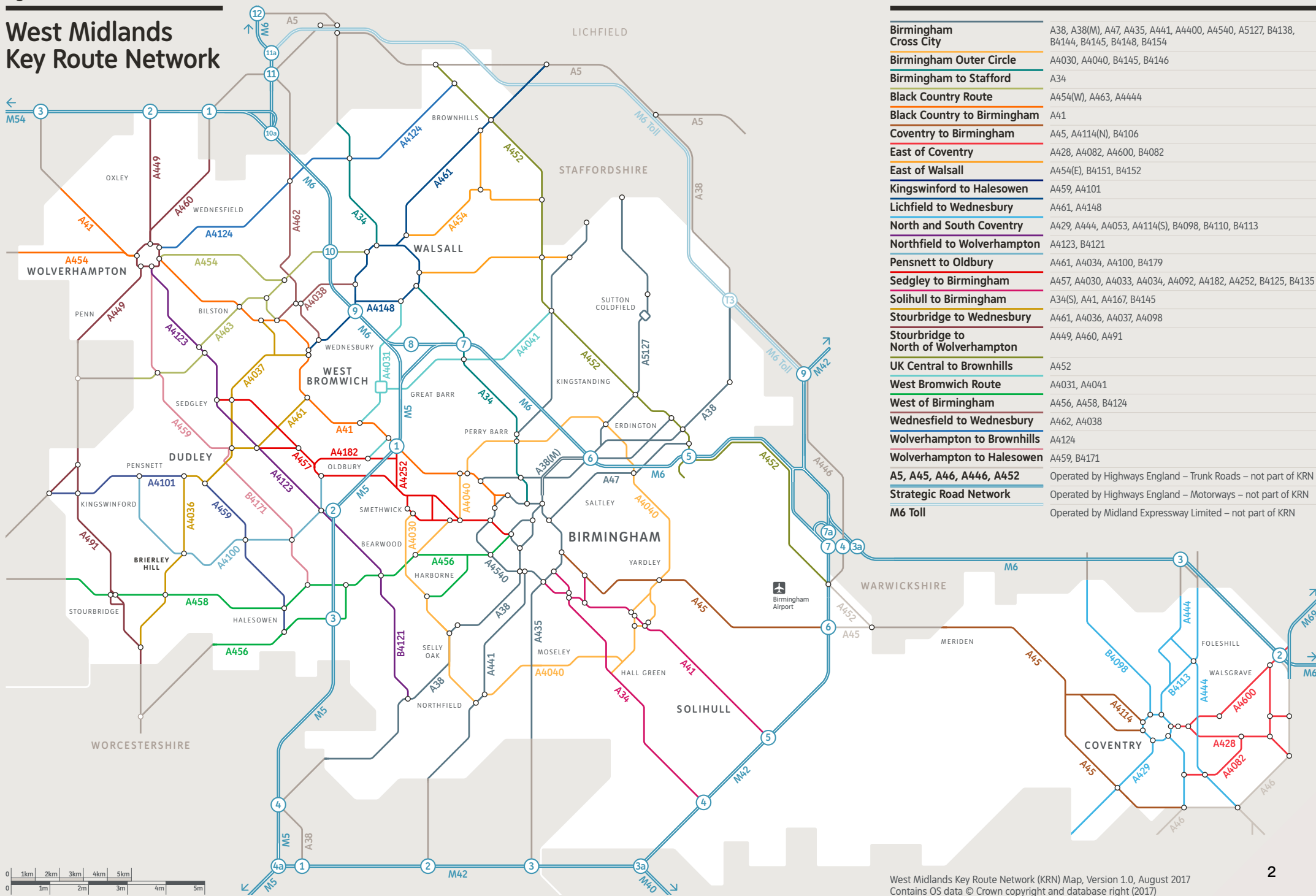


Transport for
West Midlands



Figure 1

West Midlands Key Route Network



The East of Coventry route is a 11 mile/17km section of the West Midlands Key Route Network (KRN) that serves the communities situated between Coventry City Centre and the eastern side of the city, continuing into the County of Warwickshire.

The East of Coventry Route is formed of the A428, A4600, A4082, B4027 and B4082.

The route provides vital connections between the City Centre and the Highways England Strategic Road Network (SRN) at M6 Junction 2 and the A46 - Coventry Eastern Bypass, via the A428 Binley Road. It supports the economic area known as the arc of Coventry and Warwickshire – which follows the A46, providing access for the workforce and enabling the import of materials and export of goods via the national SRN. This area is recognised as a global UK Hub in Advanced Manufacturing and Engineering, with business and research links across the globe. The economic arc provides nearly 15,000 jobs at employment sites such as Ansty Park, Jaguar Land Rover, Whitley South, Whitley East, Ryton and Stoneleigh Park.

Across the region the route provides a strategic link to Warwickshire, City of Leicester and Northamptonshire.

Within Coventry, it serves to provide access to University Hospitals Coventry and Warwickshire, and Coventry University and connects with the North and South Coventry route, where the A428 meets the A444/B4110 Junction. The

A4082 section of the route also links to the North and South Coventry route at the junction of the A4082/A444. Throughout its length, it is formed of a mix of single and dual carriageway sections passing through suburban residential communities and local shopping centres. In most cases properties are well set back from the carriageway with off-street parking and there are Red Route restrictions in place along A4600.

The route has a number of connections to the SRN. These are:

- A4600 Hinckley Road to M6 Junction 2
- A4600 Hinckley Road to M69 at M6 Junction 2
- A4600 to the A46 Coventry Eastern Bypass
- B4082 to the A46 Coventry Eastern Bypass
- A428 to the A46 Coventry Eastern Bypass

The connection to the M6 provides long distance connectivity to the northwest of England and into Scotland. The A46 provides a direct north – south regional link to Leicester, Warwick and Leamington Spa. The A46 also provides additional links to the strategic road network linking directly with the M6, M40 and M69. Additional indirect links are also provided to the A45, M1, M5, M45 and M42 for access to destinations beyond the West Midlands region.

The East of Coventry Route intersects with other

KRN routes at the following locations:

North and South Coventry Route:

- A428/A4600,
- A444 at Gosford Green
- A4082 junction with the B4110 at Abbey Park.

There are end on connections to the same Route at A444 Whitley and A4053 Coventry Ring Road.

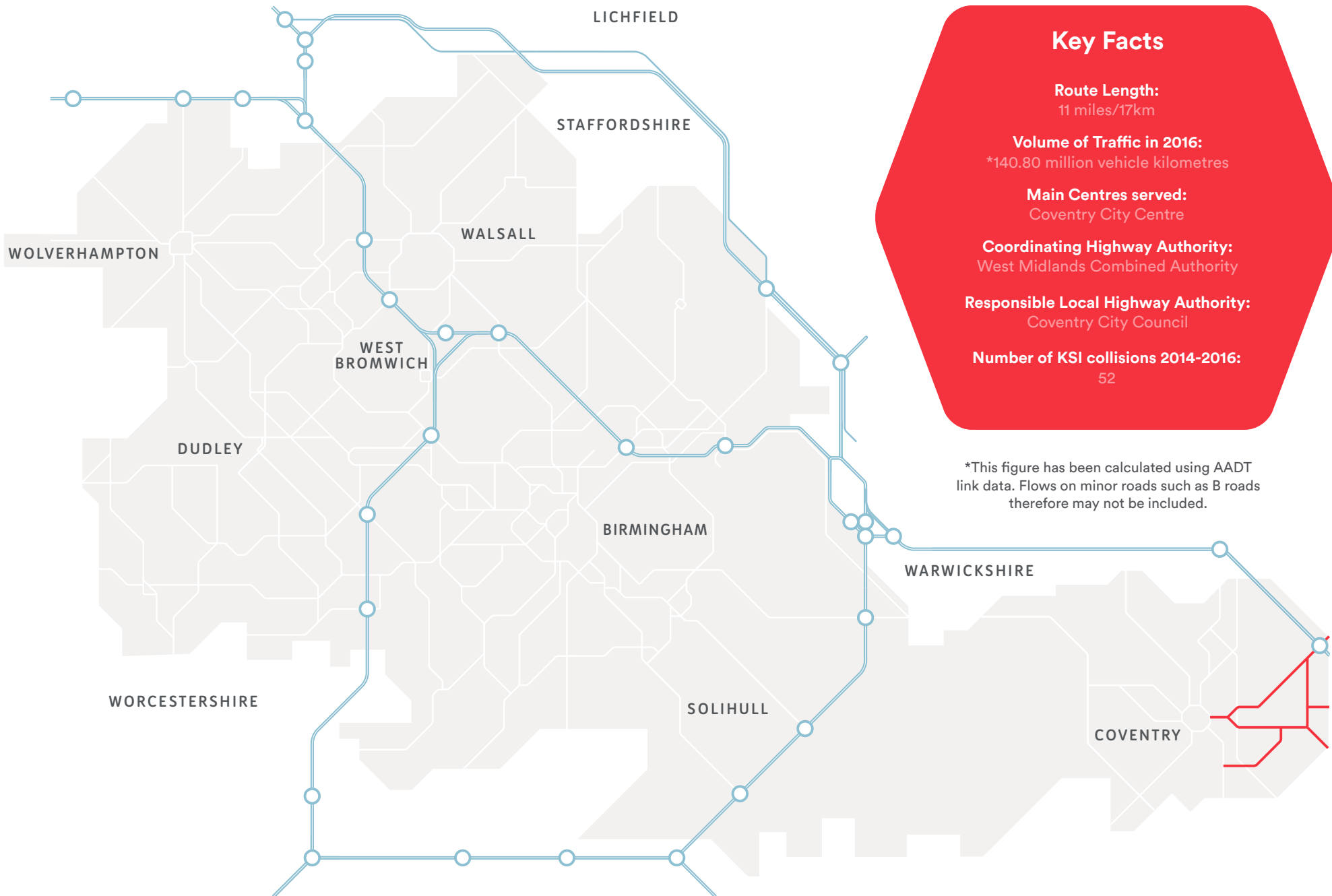


Figure 2

Congestion, Delay, Reliability

This route represents 3% of the total length of the West Midlands Key Route Network. According to the latest data available from 2016, this route had a minimum annual average daily flow (AADF) of 15,800 vehicles, a maximum of 34,900 with an average of 25,700 AADF.

The route experiences large volumes of traffic, particularly on:

- The sections of the A4600 between the Coventry Ring Road (A4053) up to the junction with Burns Road;
- The A428 Binley Road between its junction with the A4600 Walsgrave and up to its junction with Bull’s Head Lane;
- The section of the A4082 Allard Way, where it meets the B4110 and up to its junction with Langbank Avenue;
- The A428 Binley Road where it meets the B4082 Brinklow Road and up to Burns Road; and
- The A4600 between the B4082 Woodway Lane and Eden Road

The locations of the most significant congestion-related delays (60 sec/km) are set out in Tables 1 and 2.

Table 1: AM Peak Congestion Related Delays

Road	Location	Direction
A4600	Sky Blue Way, A428 Binley Road to A4053 Ringway Whitefriars	Inbound to City
A4600	Walsgrave Road, Longfellow Road to A444, Gosford Green	Inbound to City
A4600	Ansty Road, approach to B4082 Clifford Bridge Road, Wyken	Inbound to City
B4082	Clifford Bridge Road, A4600 Ansty Road to University Hospital Access	Northbound and Southbound
B4082	Clifford Bridge Road, A46 link road to B4027 Brinklow Road, Binley	Northbound and Southbound
B4082	A46 link road, approach to Clifford Bridge Road	Westbound
A428	Binley Road, A4082 Allard Way to B4110 Humber Road	Inbound to City
A428	Binley Road, Lord Lytton Avenue to Hipswell Highway	Outbound from City
A428	Binley Road, Princethorpe Way to B4027 Brinklow Road	Inbound to City and Outbound from City
A428	Brandon Road, TGI Fridays Access to A46 Coventry Eastern Bypass, Binley	Outbound from City
A4082	London Road, A444/A4144 to B4110 London Road	Inbound to City and Outbound from City

Peak hour journey time on the sections of the route experiencing the highest delays has been found to be 150% higher than (i.e. 2½ times) the equivalent free flow time, which is based on the average journey time between 22:00 – 06:00.

Due to congestion along the East of Coventry Route, there are large delays for traffic inbound and outbound to/from Coventry City Centre to and from the direction of the M6 and M69.

A particular impact of congestion on this route is to create problems with access to University Hospital. It also has an adverse impact on workforce access to the employment sites in the arc of Coventry of Warwickshire, including Jaguar Land Rover, and has potential to interfere with ‘just in time’ delivery operations.

Average Speeds

The average speed for the route in the AM Peak is between 10-20 mph throughout its busiest sections. There are several sections on this route however where average peak hour speeds are less than 10 mph. They are as follows:

- A4600: Wigston Road/Brade Drive - B4082 Clifford Bridge Rd
- B4082 Clifford Bridge Road: A428- A5600 (entire northbound section)
- A428: Princethorpe Way - B4082
- A4600: Brays Lane/Clay Lane - A444
- A4600 Sky Blue Way: Gosford Street - A444 (inbound towards Coventry only)
- A4082: A444 - B4110 London Road

Table 2: PM Peak Congestion-Related Delays

Road	Location	Direction
A4600	Sky Blue Way/Walsgrave Road, A4053 Ringway Whitefriars to Argyll Street	Inbound to City and Outbound from City
B4082	Clifford Bridge Road, A4600 Ansty Road to University Hospital Access	Northbound and Southbound
A428	Binley Road, B4110 Humber Road to Bulls Head Lane	Outbound from City
A428	Binley Road, Willenhall Lane to B4027 Brinklow Road, Binley	Inbound to City
A4082	Allard Way, approach to A428 Binley Road	Northbound
A4082	London Road, A444/A4144 to B4110 London Road	Outbound from City

Junction Capacity Issues

There are currently several junctions along the route where the evidence suggests there are capacity issues restricting the free flow of traffic in peak hours; these are:-

- A4600 Walsgrave Road and its junction with Sky Blue Way
- A4600 Walsgrave Road and its junction with Brays Lane
- A4082 Allard Way and its junction with the B4110 London Road
- A428 Binley Road and its junction with the A4082 Allard Way
- A428 Binley Road and its junction with the B4082 Brinklow Road
- B4082 Clifford Bridge Road and its junction with Belgrave Road
- A4600 Ansty Road and its junction with the B4082 Clifford Bridge Road
- A4600 Hinckley Road and its junction with Eden Road/Parkway

West Midlands Key Route Network East of Coventry

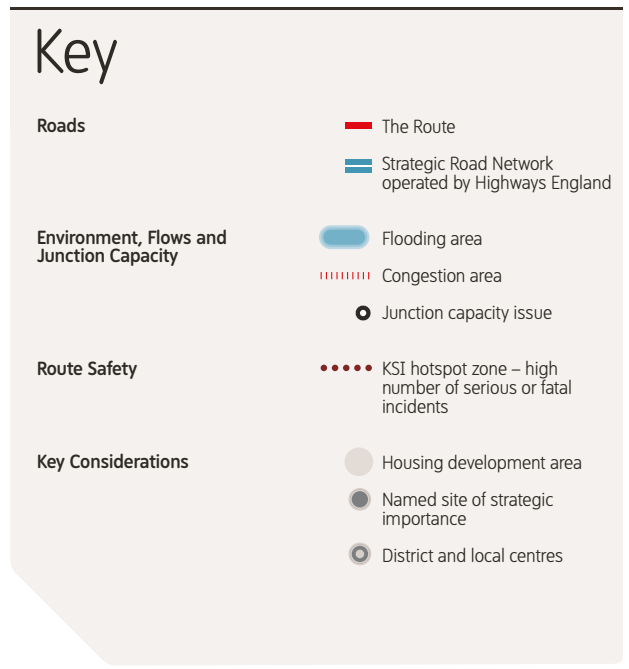
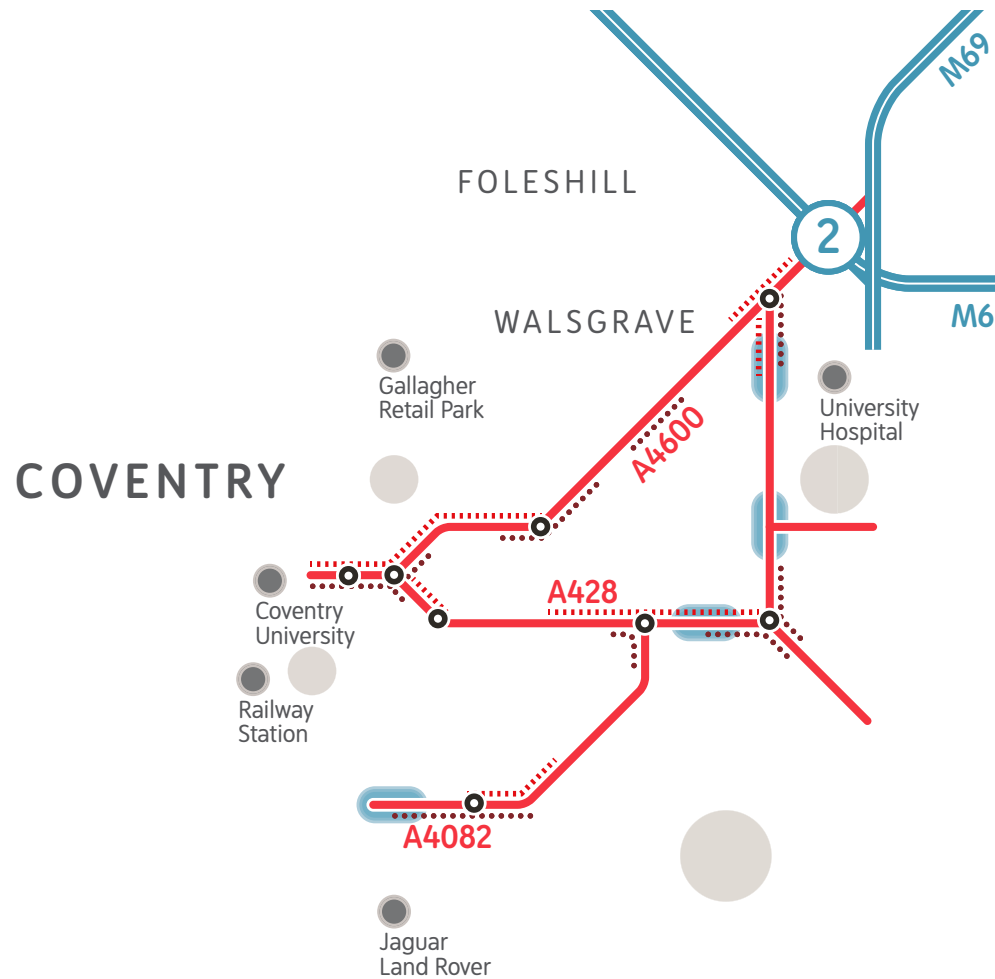


Figure 3

KRN 8 – East of Coventry

Improving Road Safety is critical to the overall vision of the West Midlands Strategic Transport Plan – Movement for Growth. The development of a new West Midlands Road Safety Strategy and Action Plan will make reference to the current West Midlands forecasts to achieve a 40% reduction in fatalities and serious injury casualties by 2020, from the 2015 baseline.

During the 2016 calendar year, we noted the following key statistics:

Collisions

- 97 collisions, involving 177 vehicles
- Main contributory factor: Failed to look properly (pedestrian) (26% of all collisions)
- Main contributory factors
 - Poor turn or manoeuvre (9% of all collisions)
 - Failed to look properly (driver) (5% of all collisions)
 - The KSI ratio for this group is one of the highest for this route at 60% with 50% of all fatalities being attributed to this group.

Casualties

- Total casualties: 125
- Killed and Seriously Injured: 19
(15% of all casualties, up 2% when compared to 2015 figure of 17 of 127)
 - Killed: 3 (2% of all casualties, up by 1%)
 - Seriously injured: 16 (12% of all casualties, up by 0.2%)
- Slight: 106 (85% of all casualties)

Casualty Types

We noted the following key statistics in relation to casualties falling into specific groups:

- Pedestrians: 23 (an increase of 6% compared to 2015)
- Powered Two wheel vehicles: 19 (an increase of 2% compared to 2015)
- Pedal cyclists: 15 (an increase of 3% compared to 2015)
- Car occupants: 68 (a reduction of 13% compared to 2015)

KSI Clusters

The A4600 and Sky Blue Way situated between the Coventry Ring Road (A4053) and its junction with the A4600 Walsgrave Road/A428 Binley Road has the highest number of KSI collisions recorded along this route. This section is mainly urban dual carriageway in a built-up residential area.



CYCLING

There are limited cycling facilities throughout most of this route. A short section of shared use cycle lane is included along the Hinckley Road (A4600) in the north. There are advisory cycle lanes included along the Binley Road (A428) between the junctions of the A4082 and A444, where the speed limit is 40mph. There are also shared/segregated paths and Toucan crossings along Sky Blue Way (A428). Additionally, there is also a short section of shared use cycle lane on Allard Way (A4082). The National Cycle Route 52 which is in close proximity meets the A444 north of the route.

The Sustainable Transport Delivery Excellence Programme (STDEP) West Midlands Strategic Cycle Network identifies 'Priority Corridors' for cycling in the region. Two corridors run along this route: on Binley Road (A428) and Ansty Road (A4600). The West Midlands Cycling Charter acknowledges that cycling levels are currently significantly below many other metropolitan core cities across the UK. The Charter sets a vision to raise levels of cycling across the West Midlands Metropolitan area to 5% of all trips by 2023. This represents a 400% increase in cycling journeys from the 1% baseline.



The route is well served by a number of high frequency bus services operating every 15-30 minutes. These services provide access to the City Centre, University Hospital Coventry and Warwickshire at Walsgrave, leisure destinations, employment sites and the surrounding communities.

The average bus speed along this route is 10.1mph (data taken from the 8/8A bus route). The average total number of daily bus trips is 21,698.

The Ansty Road and Binley Road are elements of the Core Bus Network in the West Midlands Strategic Transport Plan - Movement for Growth, and potential Sprint corridors. In January 2017, Coventry City Council embarked on an experimental suspension of some of the bus lanes along this route. The locations for the trial include:

- Ansty Road outbound at Clifford Bridge Road junction
- Ansty Road inbound between Dane Road and Burns Road
- Binley Road outbound – full length
- London Road outbound at St James Lane

Bus Lanes remain on Gosford St and Sky Blue Way, Clifford Bridge Road. It is anticipated that the evidence gathered during the trial will further inform the effectiveness of existing bus lanes and the potential impact of their removal or retention.

Table 3: Main Bus Routes

Road(s) Served	Frequency	Route No.
A428 Coventry - Binley	Every 10 mins	13
A4600 Coventry - University Hospital	Every 15 mins	9/9A
A4600/B4082 Coventry - University Hospital - Woodway Park	Every 15 mins	8/8A
A428 Coventry - Binley	Every 30 mins	86
A428/B4082 Binley - University Hospital	Every 30 mins	60
A4600/4082 Coventry - University Hospital - Binley	Every 30 mins	585

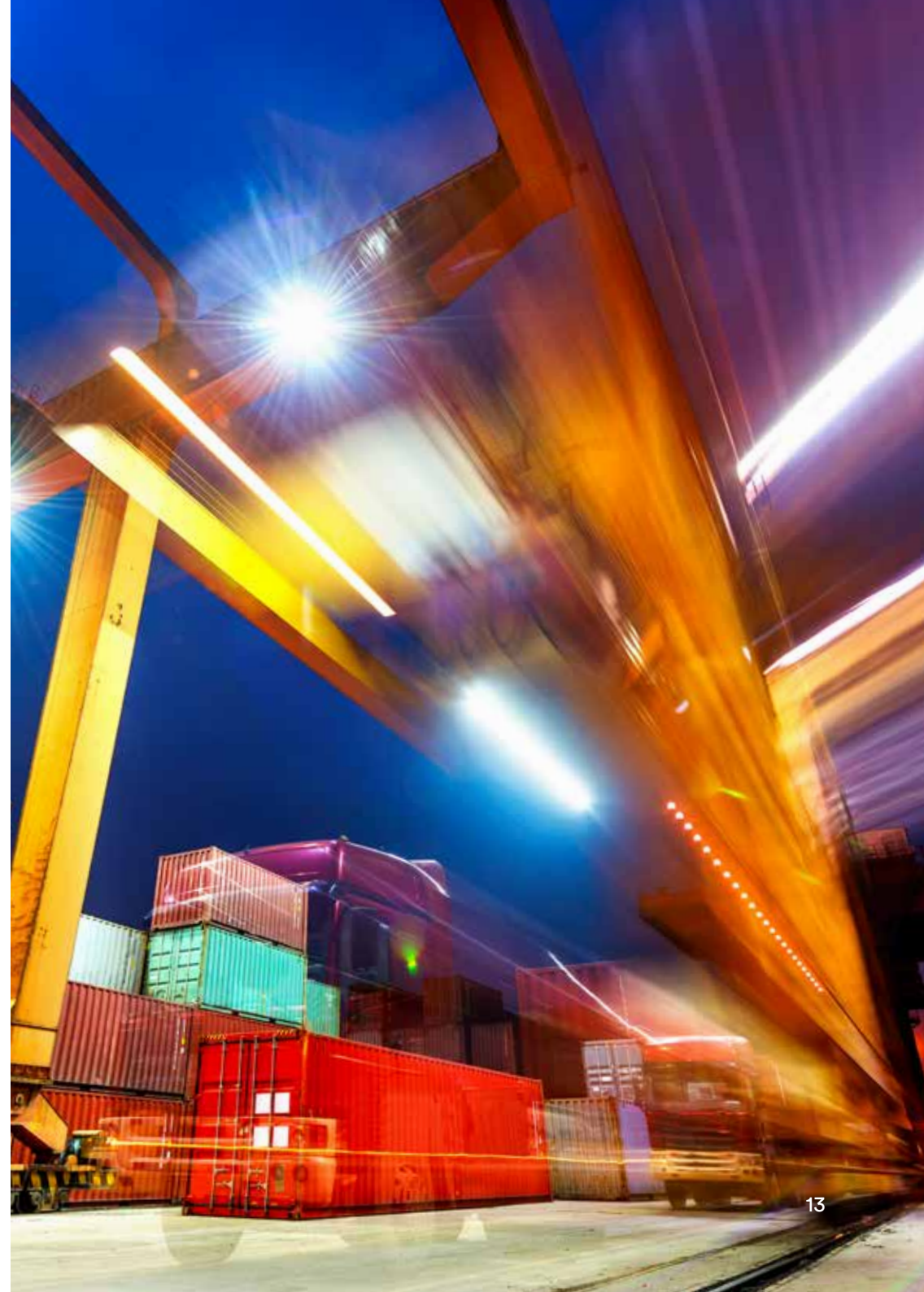
*Note- All daily averages have been obtained by analysing 15 days data (Mon-Fri) during the month of March 2017.

In terms of rail, there are no mainline railway stations located along the route. However the Coventry – London rail line passes through the southern edge of the route and the West Midlands Strategic Transport Plan identifies the potential for new stations at Coventry East and Rugby Parkway in Warwickshire.

At present there are no specific plans to extend the Midland Metro or the proposed Sprint Rapid Transit to serve this route. However, the City Council is exploring plans to introduce a Very Light Rail network to serve the City Centre, the communities and employment sites along this route.

FREIGHT AND LOGISTICS

The AADF data for 2016 has been used to analyse HGV flows on each respective route. This route is not of particular significance for freight, with HGV flows relatively low. The average number of Heavy Goods Vehicles using the route on a daily basis was 360, which represents 1% of all vehicular traffic. However, the route links to the M6 and M69 which are of national importance; the M69 is used to transport goods to the East Midlands and is used as an alternative to the M1, whilst the M6 is crucial in the movement of freight. In total, between the Midlands and North West in 2014, approx. 45.5m tonnes of goods were transported (MDST data), a significant amount of which travels on the M6. The route also links to the A45 which leads to Coventry Airport, where a variety of cargo airlines serve the airport.



Resilience

The A4600 provides a parallel route to the A428 and A4082 whilst the A46 trunk road provides an alternative link to B4082, so there is a considerable degree of resilience contained within the East of Coventry network. However, given the existing capacity constraints, a restriction on any of the roads will have considerable adverse implications for journey times on the remainder of this route.

Diversion Route

In conjunction with the North and South of Coventry KRN Route, the A428 section of this route is used by Highways England as part of the signed Emergency Diversion Route (EDR) when there are closures or incidents on the M6 motorway between junctions 2 and 3, or on the A46 between M6 junction 2 and the Binley roundabout.

Also in conjunction with the North and South of Coventry KRN Route, the A428 and A4082 sections of the route are used as part of the EDR for the A46 trunk road between Tollbar End and Binley.

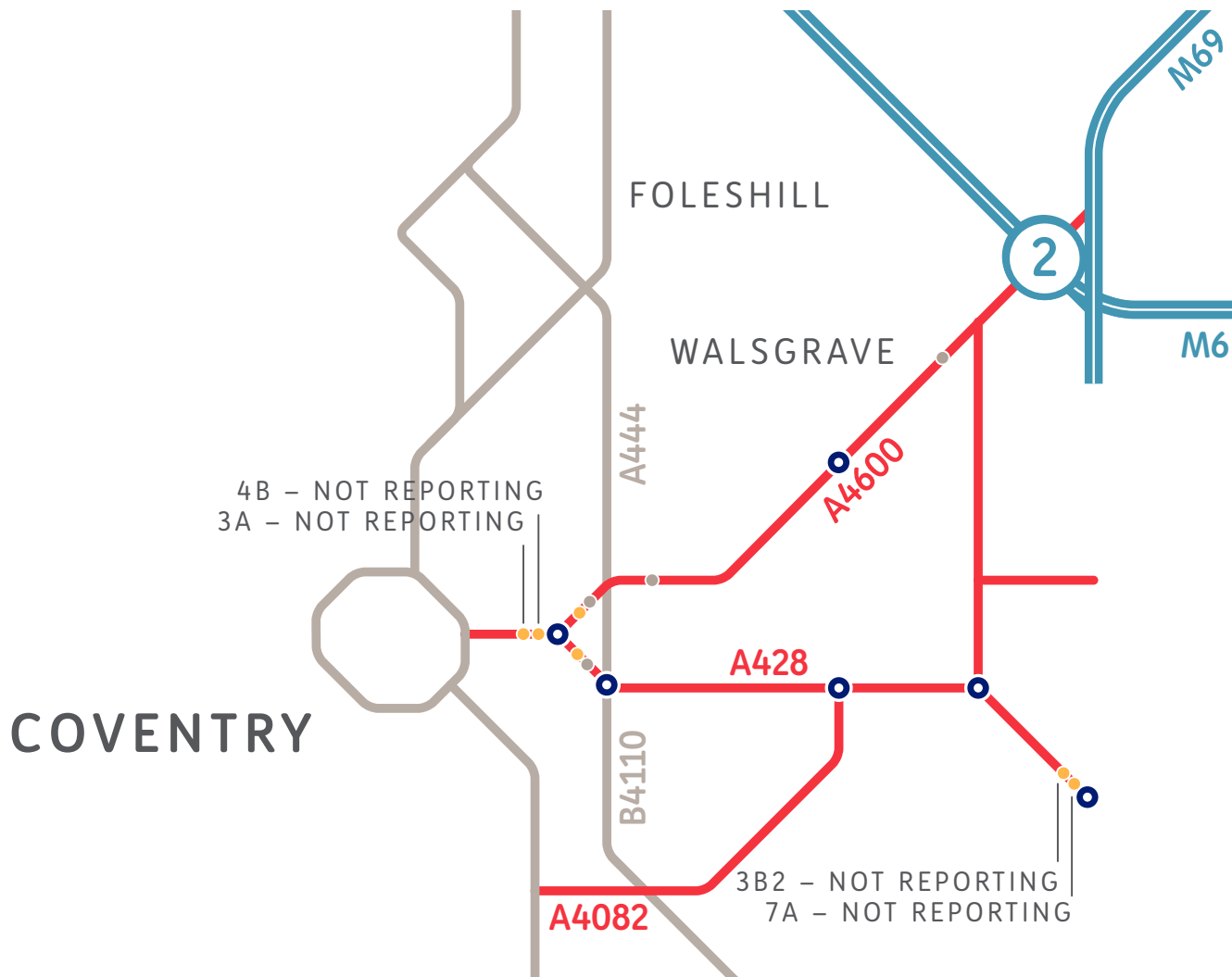
The B4082 and A428 sections of the route form the EDR for the A46 trunk road between the Walsgrave and Binley roundabouts. This has major implications for access to University Hospital.

Flooding

Flooding on this route impacts on overall performance, safety of road users and affects the lives of those living in the vicinity. The evidence gathered indicates that there are some areas on this route that pose flood risk. These include:

- A428 Binley Road is exposed to a high level of fluvial flood risk (greater than a 1 in 30 chance of occurring in any year) where the River Sowe passes underneath at Binley Bridge. The predicted flooding extends across full width of the carriageway.
- A4600 Ansty Road is exposed to a high level of fluvial flood risk (greater than a 1 in 30 chance of occurring in any year) where the River Sowe passes underneath at Clifford Bridge. The predicted flooding covers only a small section of the carriageway.
- A4082 London Road is exposed to a high level of fluvial flood risk (greater than a 1 in 30 chance of occurring in any year) where the River Sherbourne passes underneath at Whitley Bridge. The predicted flooding covers only a small section of the carriageway.
- B4082 Clifford Bridge Road is exposed to a high level of fluvial flood risk (greater than a 1 in 30 chance of occurring in any year) where the River Sowe passes underneath at Sowe Bridge. The predicted flooding covers a small section of the carriageway as the road structure elevated above the flood plain.

West Midlands Key Route Network East of Coventry



Key

Roads

- The Route
- Strategic Road Network operated by Highways England

Asset Location & Conditions
(where known & information available)

- Automatic Number Plate Recognition (ANPR) / Journey Time Monitoring System (JTMS) locations
- Traffic Camera locations
- Bluetooth Detection reporting into Stratos



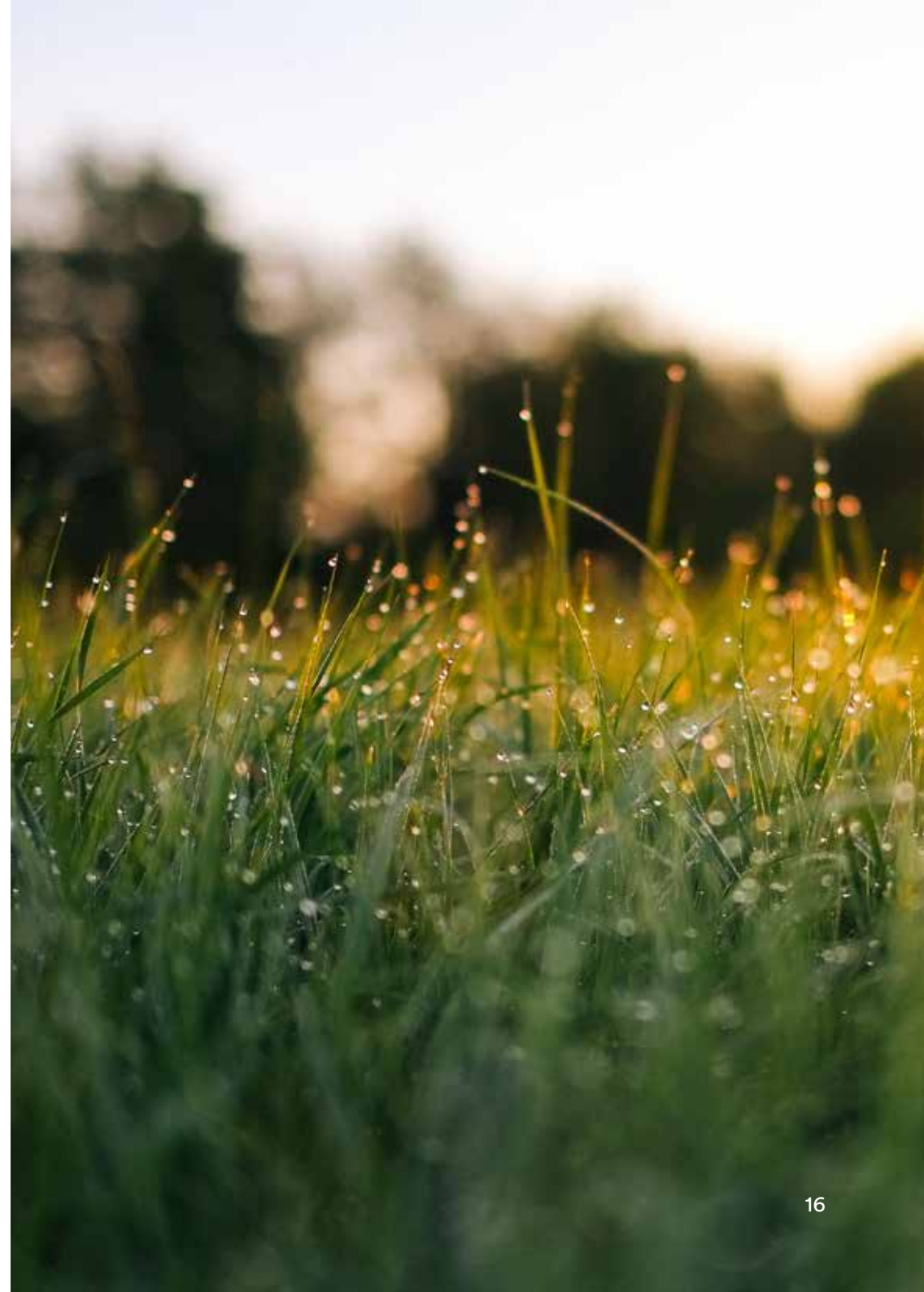
Figure 4

KRN 8 – East of Coventry

There are inequalities in health between the local authorities within the West Midlands – at local authority level the lowest healthy life expectancy at birth for men is 56.4 years, and the highest is 63.8 years. Amongst women the lowest is 59 years and highest 67.9 years. Similarly there are inequalities in healthy life expectancies within each local authority. Closing this gap in health inequalities and increasing the healthy life expectancy by 2030 is an objective of the WMCA's Strategic Economic Plan.

The A4082 bisects an area with a higher proportion of children than the WMCA average. Public Health England also estimates this area has a high proportion of obese adults. The entire city of Coventry is an Air Quality Management Area (AQMA) for Nitrous Oxide (NO₂). This includes sections along this route such as the A4600, Walsgrave Road and Sky Blue Way, which are exceeding the 40µg/m³ annual mean limit.

The West Midlands has significant air quality problems. Every year there are between 2,000 and 2,400 deaths caused by air pollution. This is a huge health issue for people in the region, increasing the risk of lung disease and heart disease. There are parts of our region where considerable action such as the introduction of Clean Air Zones (CAZs) is required by Government to improve air quality.



Across the West Midlands the local authorities have a statutory duty to maintain its highway network in a safe condition. This also includes carrying out routine maintenance of highway assets which could include up to 12 specific groups. An Asset Management Plan is produced which aims to ensure that any future issues with the assets could be address in a proactive way.

Carriageway Condition

The carriageway condition across this route generally is in a good and safe condition. Over the past six years there has been a systematic planned programme of capital maintenance carried out on the A428, A4600, A4082 and B4082.

Footway Condition

The footway condition across the East of Coventry route is in a generally good and safe condition. Over the past six years a systematic planned and programme of capital maintenance has been carried out on the A428, A4600, A4082 and B408.

Structures

Eleven highway structures have been identified of 7 bridges, 2 culverts and 2 subways on the East of Coventry route, which are systematically inspected and maintained. The overall condition of these structures is in a good to very good.

Further details on carriageway, footway and structure condition can be found in the Technical Annex.



Development proposals directly affecting this route

Housing

- Walsgrave Hill Farm 900 dwellings (2017-30)

Development proposals indirectly affecting this route

Housing

- Walsgrave Sustainable Urban Extension 1500 dwellings (2020-30)

Employment

- Ansty Park 5400 jobs (2017-30)
- Whitley Business Park 5000 jobs (2017-25)
- Ryton 4500 jobs (2017-30)
- Coventry and Warwickshire Gateway 27000 jobs (2017-30)

Committed Transport Improvements (as outlined in Movement for Growth - 2026 Delivery Plan for Transport)

- No significant proposals.

GLOSSARY

- AADF** – Annual average daily flow
- AQMA** – Air Quality Management Areas
- DfT** – Department for Transport
- EDR** – Emergency Diversion Route
- HGV** – Heavy Goods Vehicles
- HLE** – Healthy life expectancy
- HS2** – High Speed Rail Two
- JTMS** – Journey Time Measurement Systems
- KRN** – Key Route Network
- KSI** – Killed or seriously injured
- LE** – Life expectancy
- LEP** – Local Enterprise Partnership
- LSOA** – Lower Layer Super Output Areas
- MDST** – MDS Transmodal
- MSOA** – Middle Layer Super Output Areas
- PIA** – Personal injury accidents
- SRN** – Strategic Road Network
- STDEP** – Sustainable Transport Delivery Excellence Programme
- TfWM** – Transport for the West Midlands
- TCG** – Tactical Co-ordination Group
- UKTI** – UK Trade and Investment
- UTMC** – Urban Traffic Management Control
- VMS** – Variable Message Sign
- WM** – West Midlands
- WMCA** – West Midlands Combined Authority

AADF Data:

AADF counts for A roads on each route:
<https://bit.ly/2fbapuc>

Route Safety:

Reported casualty and accident rates by urban and rural roads, road class, road user type, severity and pedestrian involvement, Great Britain, 2015.

Committed Schemes:

West Midlands Combined Authority. Movement for Growth: The West Midlands Strategic Transport plan.

West Midlands Strategic Cycle

Network:

West Midlands Combined Authority Board Report, 20 January 2017, item 4.3 - Strategic Cycle Network
<https://bit.ly/2hrrCAi>

Freight Information:

MDS Transmodal Data. Provided in Confidence for Midlands Connect Freight Study.

Enterprise Zones:

<https://bit.ly/2uZLDTe>
<https://bit.ly/2u7DCN1>

Road Haulage Companies:

UK Trade & Investment Road Haulage Industry, Midlands Hauliers. Provided in Confidence for Midlands Connect Freight Study.

National Cycle Routes, Sustrans:

<https://bit.ly/18FFBsT>

HS2 Connectivity Package:

HS2 Growth Strategy, Connectivity Programme. GBSLEP. <https://bit.ly/2woBqxp>

Average Speeds and Congestion Data:

West Midlands Strategic Highways Phase 2: Key Route Network Definition and Outline Performance. Produced by Mott Macdonald for West Midlands Integrated Transport Authority. March 2016.

Route Safety:

Department for Transport. Reported Road Casualties Great Britain, annual report: 2015.
<https://bit.ly/2hrcldb>

Air Quality Management Areas:

Department for Environment, Food and Rural Affairs, March 2017 AQMA Dataset.
<https://bit.ly/2fEduLf>

Male and Female Healthy Life

Expectancy:

Office for National Statistics. Life Expectancy (LE) and Healthy Life Expectancy (HLE) at birth for males by Middle Layer Super Output Areas (MSOAs) in England, 2009 to 2013. Published 2015. <https://bit.ly/2vwtxd1>

Childhood Obesity:

Public Health England. National Child Measurement Programme data from 2012/13 to 2014/15, aggregated by MSOA. Published 2016
<https://bit.ly/2p3ocVV>

Younger Population:

ONS: 2011 Census aggregate data. Population aged 0-17, as a percentage of total population by LSOA.

Older Population:

ONS: 2011 Census aggregate data. Population aged 65+, as a percentage of total population by LSOA.

Living with a Disability:

ONS: 2011 Census aggregate data. Households with at least one person living with a disability, as a percentage of all households by LSOA.

Unemployment:

ONS: 2011 Census aggregate data. No adults in employment in household, as a percentage of all households by LSOA.

West Midlands Cycling Charter:

<https://bit.ly/2xbg4oK>