

West Midlands Key Route Network

Sedgley to Birmingham



Transport for
West Midlands

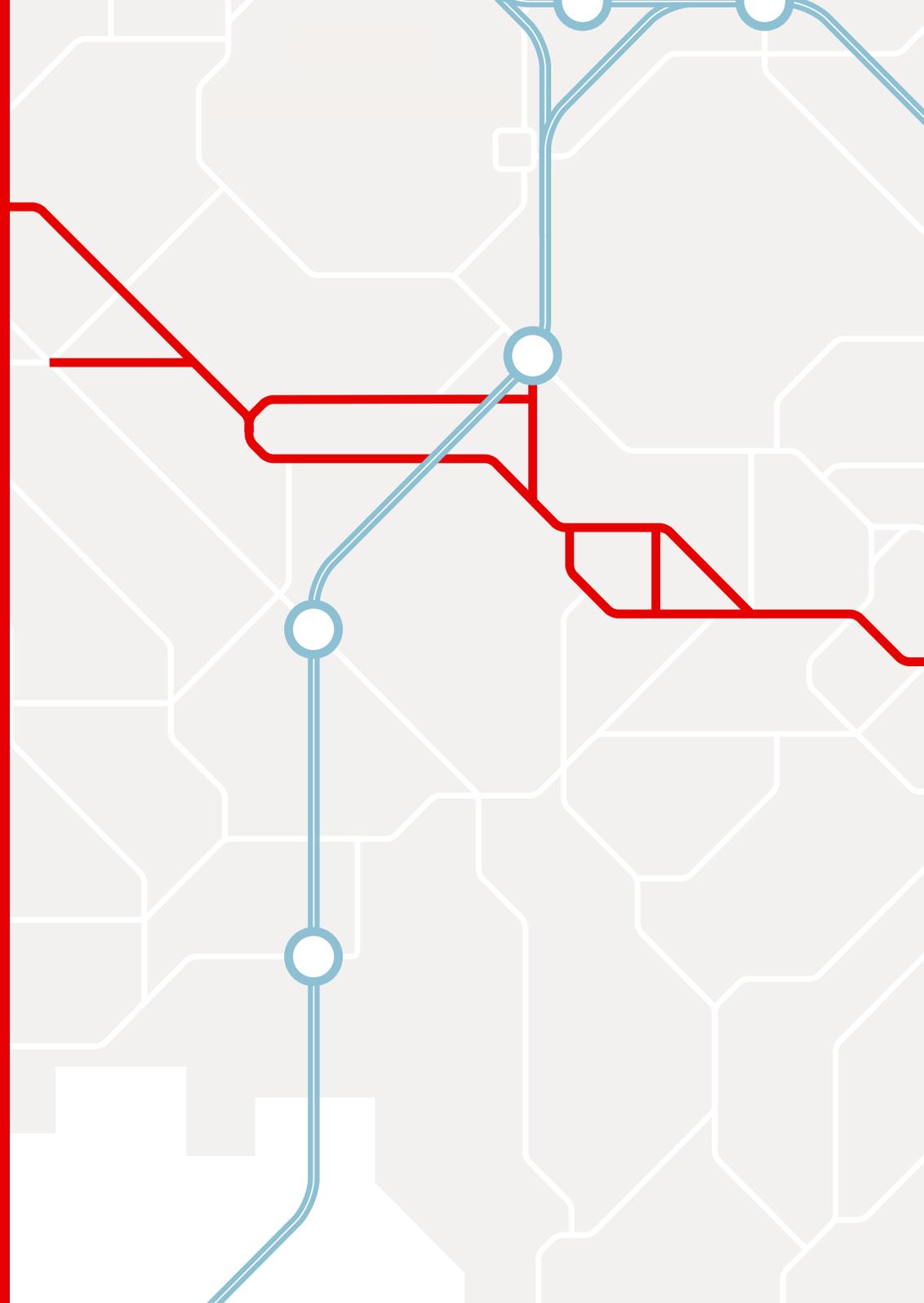
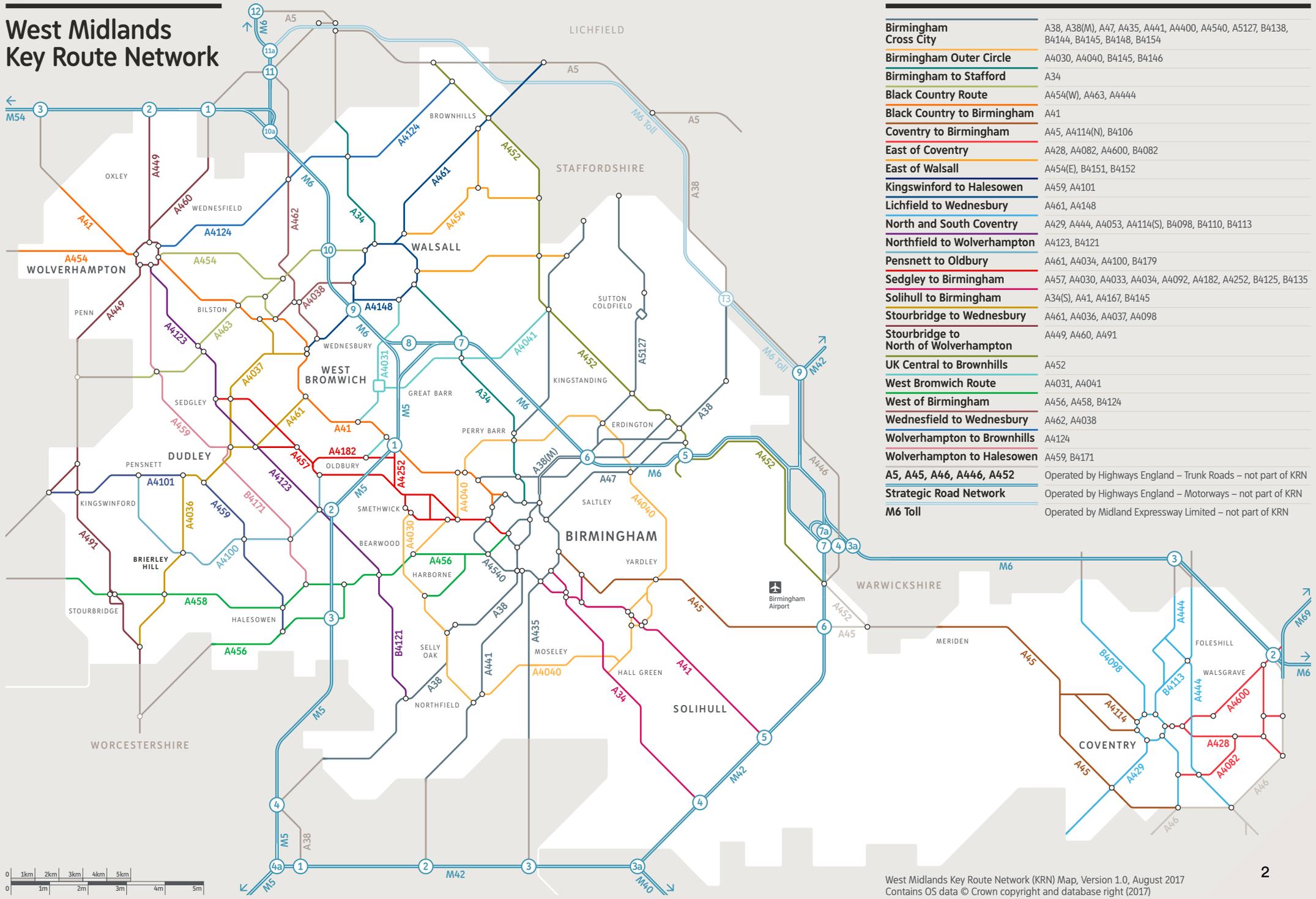


Figure 1

West Midlands Key Route Network



Birmingham Cross City	A38, A38(M), A47, A435, A441, A4400, A4540, A5127, B4138, B4144, B4145, B4148, B4154
Birmingham Outer Circle	A4030, A4040, B4145, B4146
Birmingham to Stafford	A34
Black Country Route	A454(W), A463, A4444
Black Country to Birmingham	A41
Coventry to Birmingham	A45, A4114(N), B4106
East of Coventry	A428, A4082, A4600, B4082
East of Walsall	A454(E), B4151, B4152
Kingswinford to Halesowen	A459, A4101
Lichfield to Wednesbury	A461, A4148
North and South Coventry	A429, A444, A4053, A4114(S), B4098, B4110, B4113
Northfield to Wolverhampton	A4123, B4121
Pensnett to Oldbury	A461, A4034, A4100, B4179
Sedgley to Birmingham	A457, A4030, A4033, A4034, A4092, A4182, A4252, B4125, B4135
Solihull to Birmingham	A34(S), A41, A4167, B4145
Stourbridge to Wednesbury	A461, A4036, A4037, A4098
Stourbridge to North of Wolverhampton	A449, A460, A491
UK Central to Brownhills	A452
West Bromwich Route	A4031, A4041
West of Birmingham	A456, A458, B4124
Wednesfield to Wednesbury	A462, A4038
Wolverhampton to Brownhills	A4124
Wolverhampton to Halesowen	A459, B4171
A5, A45, A46, A446, A452	Operated by Highways England – Trunk Roads – not part of KRN
Strategic Road Network	Operated by Highways England – Motorways – not part of KRN
M6 Toll	Operated by Midland Expressway Limited – not part of KRN



The Sedgley to Birmingham route is a 16 mile/25km section of the West Midlands Key Route Network (KRN), providing strategic regional connectivity cross the West Midlands.

The route provides strategic links and connectivity to Birmingham City Centre from key locations around suburban areas of northwest Birmingham, Smethwick, Oldbury, Tipton and Sedgley which are essential for commuters, freight and access to employment opportunities.

Within the Black Country, this route supports economic growth and is essential for attracting new business opportunities to the area. It enables direct access to Birmingham City Hospital via Spring Hill.

The Sedgley to Birmingham route is formed of the A457 with sections of the A4034, A4030, A4092, A4182, A4252, A4033 B4125, Cape Hill (unclassified) and B4135.

The route has no direct connections to the Strategic Road Network (SRN) but is linked to the M5 motorway at Junction 1 via the A4252 Kenrick Way West and Junction 2 via the A4034 Churchbridge, thus facilitating the movement of goods and services from employment sites, requiring access to the motorway network.

It also forms crucial connections with seven routes on the Key Route Network, these are:-

Birmingham Cross City

- A457 Parade/A4400 Great Charles Queensway
- A457 Summer Hill Road/A4540 Ladywood Middleway

Birmingham Outer Circle

- A4030
- A457 Dudley Road/A4040 City Road
- A457 Dudley Road/A4040 Handsworth Road

Black Country to Birmingham

- A4252 Kenrick Way/A41/M5 Junction 1

West Bromwich Route

- A4182 Kenrick Way/A4031 Trinity Way

Pensnett to Oldbury

- A457 Oldbury Ringway/A4034 Churchbridge

Stourbridge to Wednesbury

- A457 Sedgley Road East/A461 Dudley Port
- A457 Sedgley Road West/A4037 Dudley Road

Northfield to Wolverhampton

- A457 Sedgley Road West/A4123 Birmingham New Road

With the exception of the sections of the route between Smethwick and Oldbury, the route is single carriageway throughout. The dual carriageway sections are A457 from the Dudley Road/A4092 Cape Hill junction to the A4034 Oldbury Ringway/A457 Dudley Road junction and the whole length of the A4182 Kenrick Way. These sections provide access to services, commercial businesses and residential properties in West Bromwich and Oldbury.

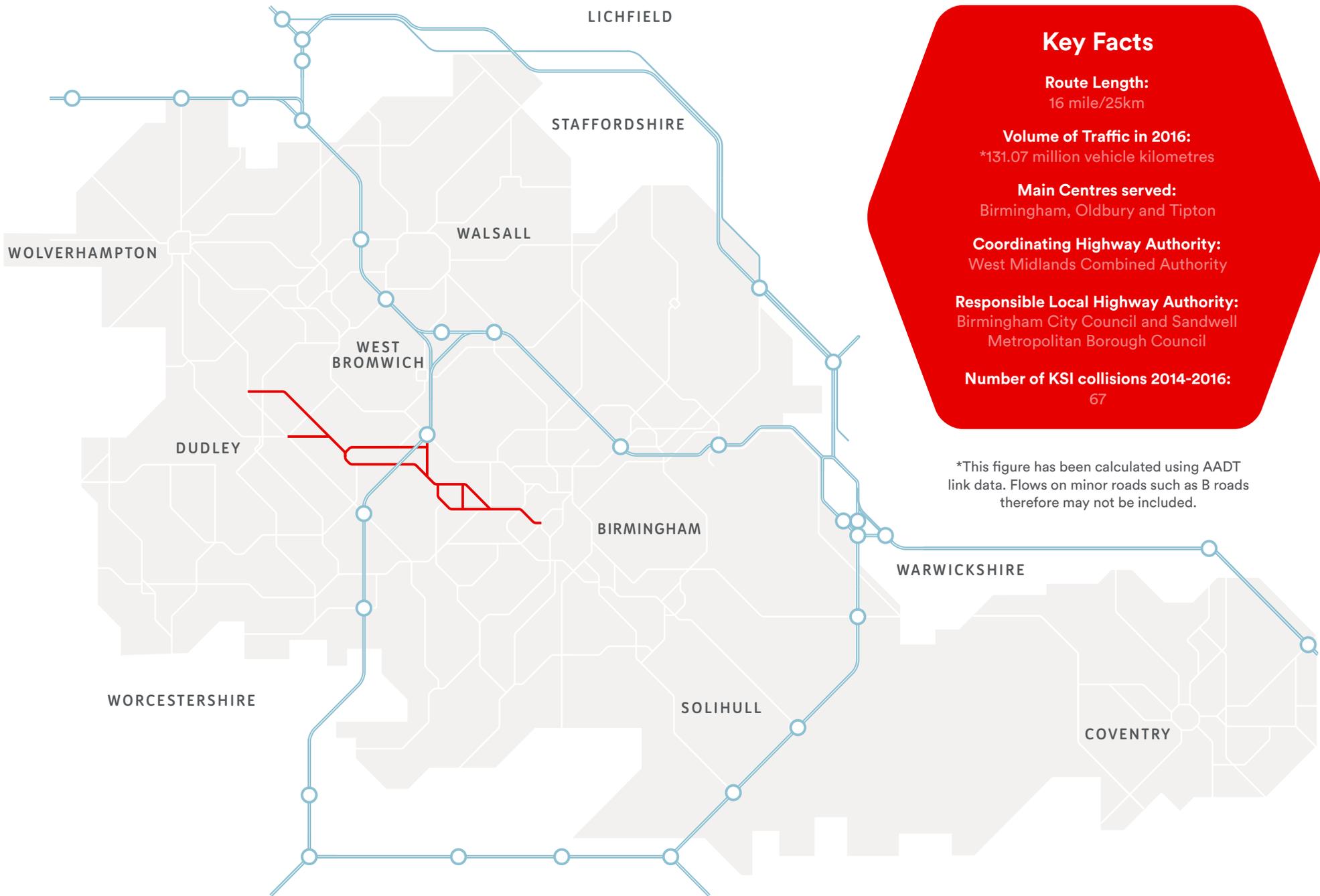


Figure 2

Congestion, Delay, Reliability

This route represents 4% of the total length of the West Midlands KRN. According to the latest data available from 2016, this route had a minimum annual average daily flow (AADF) of 12,100 vehicles, a maximum of 35,100 with an average of 19,100 AADF.

The route experiences large volumes of traffic, particularly on:

- The A457 Tollhouse Way between its junctions with the A4030 High Street and the A4252 Telford Way.
- The A457 Sedgley Road East/Tipton Road/ Dudley Road East/Dudley Road between the A461 Dudley Port and the A4034/ Freeth Street at Oldbury; and
- The A457 Sedgley Road West between its junctions with the A4123 Birmingham New Road and the B4517 Owen Street at Tipton;

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
A457	Sedgley Road West, A4123 Birmingham New Road to B4517 Owen Street, Tipton	Eastbound and Westbound
A457	Sedgley Road East, Victoria Road to A461 Dudley Port	Eastbound
A457	Sedgley Road East, Cleton Street to A461 Dudley Port	Westbound
A457	Sedgley Road East/Tipton Road/Dudley Road East/Dudley Road, Cleton Road, Dudley Port, to A4034/Freeth Street at Oldbury; and	Eastbound
A4034	Bromford Road, A4182 Kelvin Way to Broadwell Road, Oldbury	Westbound
A4182	Kenrick Way, Union Street to A4031 Spon Lane, Oldbury	Westbound
A4252/A457	Telford Way/Tollhouse Way, Great Arthur Street to New Street, Smethwick	Eastbound
A4030	High Street, Firs Lane to Coopers Lane, Smethwick	Westbound
A457	Grove Lane/Dudley Road, B4135 Cranford Street, Smethwick, to Birmingham City Hospital Access	Eastbound
B4135	Cranford Street/Heath Street, A457 Grove Lane to A457 Dudley Road	Eastbound
A457	Dudley Road, Heath Street South to A4040 Ikniel Port Road	Westbound

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.

A particular impact of the congestion is to create problems with access to the Birmingham New Street and Snow Hill Stations, Birmingham Children’s Hospital, Birmingham City Hospital, and industrial areas located west of Birmingham City Centre in Smethwick, off Kenrick Way and Kelvin Way, around Oldbury, Tividale, Tipton and Vaughan Trading Estate where businesses may supply or rely on just-in-time deliveries.

Average Speeds

The average speed for this route in the AM peak is between 10-20 mph throughout its busiest sections. The areas approaching Birmingham City Hospital and Oldbury are particularly slow during the peak periods. The worst performing sections where average speeds are below 10 mph are as follows:

- B4135: Grove Lane/Soho Way to A457
- A457: Grove Lane to Western Rd
- A4252 Telford Way: A457 to Kenrick Way

Table 2: PM Peak Congestion-Related Delays

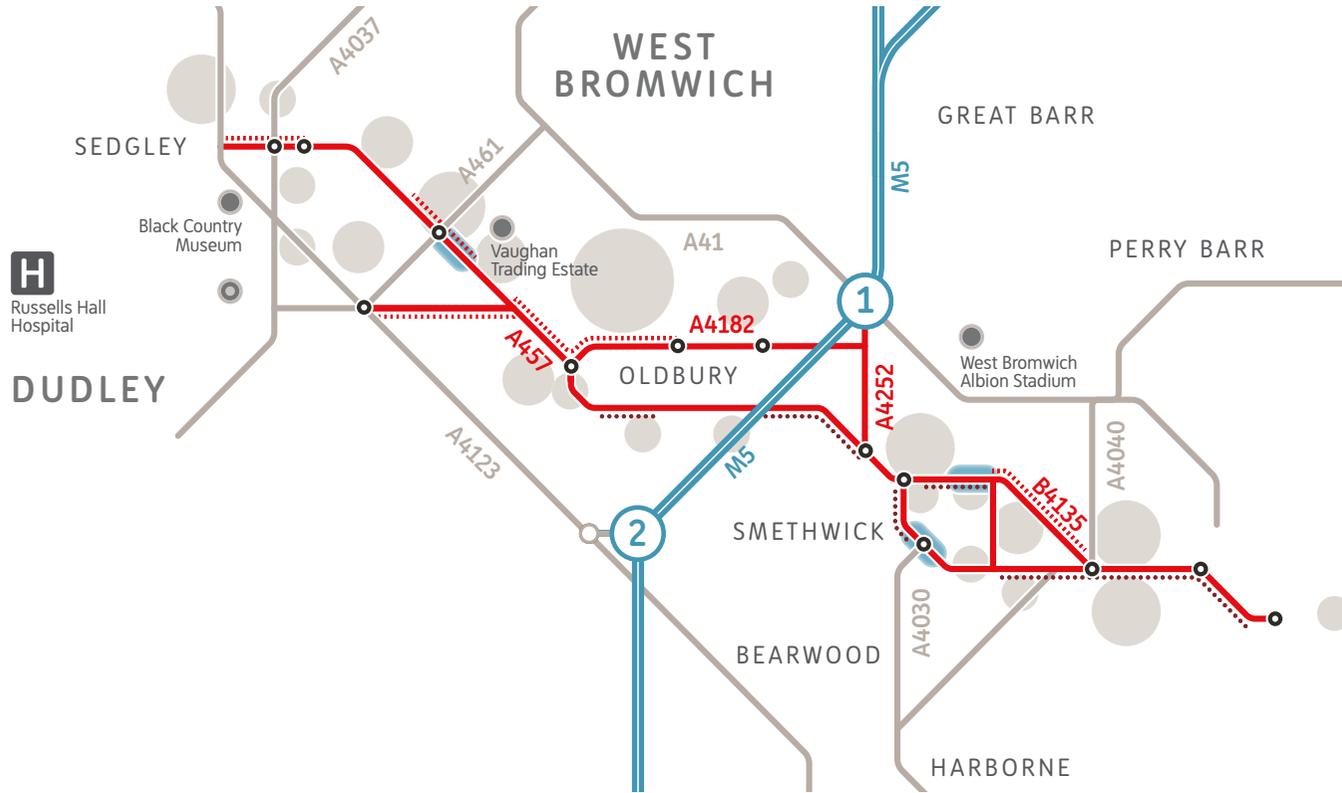
Road	Location	Direction
A457	Sedgley Road West, B4517 Owen Street, Tipton to A4123 Birmingham New Road	Westbound
A457	Sedgley Road East, Victoria Road to A461 Dudley Port	Eastbound
A457	Sedgley Road East, Cleton Street to A461 Dudley Port	Westbound
A457	Dudley Road East, A4033 Tividale Road to A4034, Oldbury	Eastbound and Westbound
A4034	Bromford Road, A457 Dudley Road East to A4182 Kelvin Way, Oldbury	Eastbound
A4034	Bromford Road, A4182 Kelvin Way to Broadwell Road, Oldbury	Westbound
A4182	Kenrick Way, Union Street to A4031 Spon Lane, Oldbury	Westbound
A4252	Kenrick Way, A4182 Telford Way to M5 Junction 1	Northbound
A4252/A457	Telford Way/Tollhouse Way, Great Arthur Street to New Street, Smethwick	Eastbound
A4030/A457	High Street/Tollhouse Way, B4125 High Street to A4182 Telford Way, Smethwick	Westbound
B4125/Cape Hill	High Street/Cape Hill, A457 Grove Lane to A4030 Bearwood Road, Smethwick	Eastbound and Westbound
B4135	Cranford Street, Winson Street to A457 Grove Lane	Westbound
B4135	Heath Street, Winson Street to A457 Dudley Road	Eastbound
A457	Dudley Road, A457 Grove Lane, Smethwick, to Birmingham City Hospital Access	Eastbound
A457	Summer Hill Road/Spring Hill/Dudley Road, Summer Hill Street to A457 Grove Lane, Smethwick	Westbound
A457/B4135	Sand Pits/Parade, Summer Hill Terrace to A4400 Paradise Circus Queensway	Eastbound

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:

- A457 Sedgley Road West/ A4037 Hurst Lane
- A457 Sedgley Road West/B4517 High Street
- A457 Sedgley Road East/A461 Dudley Port
- A4033 Tividale Road/A4123 New Birmingham Road
- A457 Dudley Road/Oldbury Ringway
- A4034 Bromford Road/Brandon Way
- A4182 Kenrick Way/Trinity Way
- A457 Oldbury Road/Telford Way
- A457 Tollhouse Way/A4030 High Street
- A457 Dudley Road/Heath Street/Northbrook Street
- A447 Spring Hill/A4540 Ladywood Middleway

West Midlands Key Route Network Sedgely to Birmingham



Key

Roads	— The Route
	— Strategic Road Network operated by Highways England
Environment, Flows and Junction Capacity	 Flooding area
	 Congestion area
	 Junction capacity issue
Route Safety	••••• KSI hotspot zone – high number of serious or fatal incidents
Key Considerations	 Housing development area
	 Named site of strategic importance
	 District and local centres

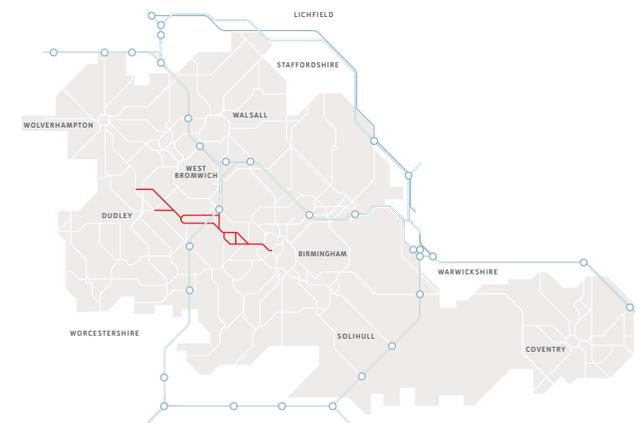


Figure 3

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 have regard 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 on this route:

Collisions

- 150 collisions, involving 274 vehicles
- Main contributory factor: Failed to look properly (pedestrian) (20% of all collisions)
 - The Killed and Seriously Injured (KSI) ratio for this group is at 10% with 50% of all fatal collisions being attributed to this group.
- Main contributory factors
 - Failed to look properly (driver) (9% of all collisions)
 - Poor turn or manoeuvre (9% of all collisions)

Casualties

- Total casualties: 202
- Killed and Seriously Injured: 27
(13% of all casualties, down 3% when compared to 2015 figure of 25 of 245)
 - Killed: 2 (1% of all casualties, down by 0.2%)
 - Seriously injured: 25 (12% of all casualties, up by 3%)
- Slight: 175 (87% of all casualties)

Casualty Types

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

- Pedestrians: 47 (an increase of 5% compared to 2015)
- Powered Two wheel vehicles: 15 (a reduction of 6% compared to 2015)
- Pedal cyclists: 8 (a reduction of 3% compared to 2015)
- Car occupants: 131 (an increase of 4% compared to 2015)

KSI Clusters

There is a large cluster of KSI collisions on the A457/A4030 between Summer Hill Road and Smethwick Rolfe Street railway station. This section of the route is in a built up area.

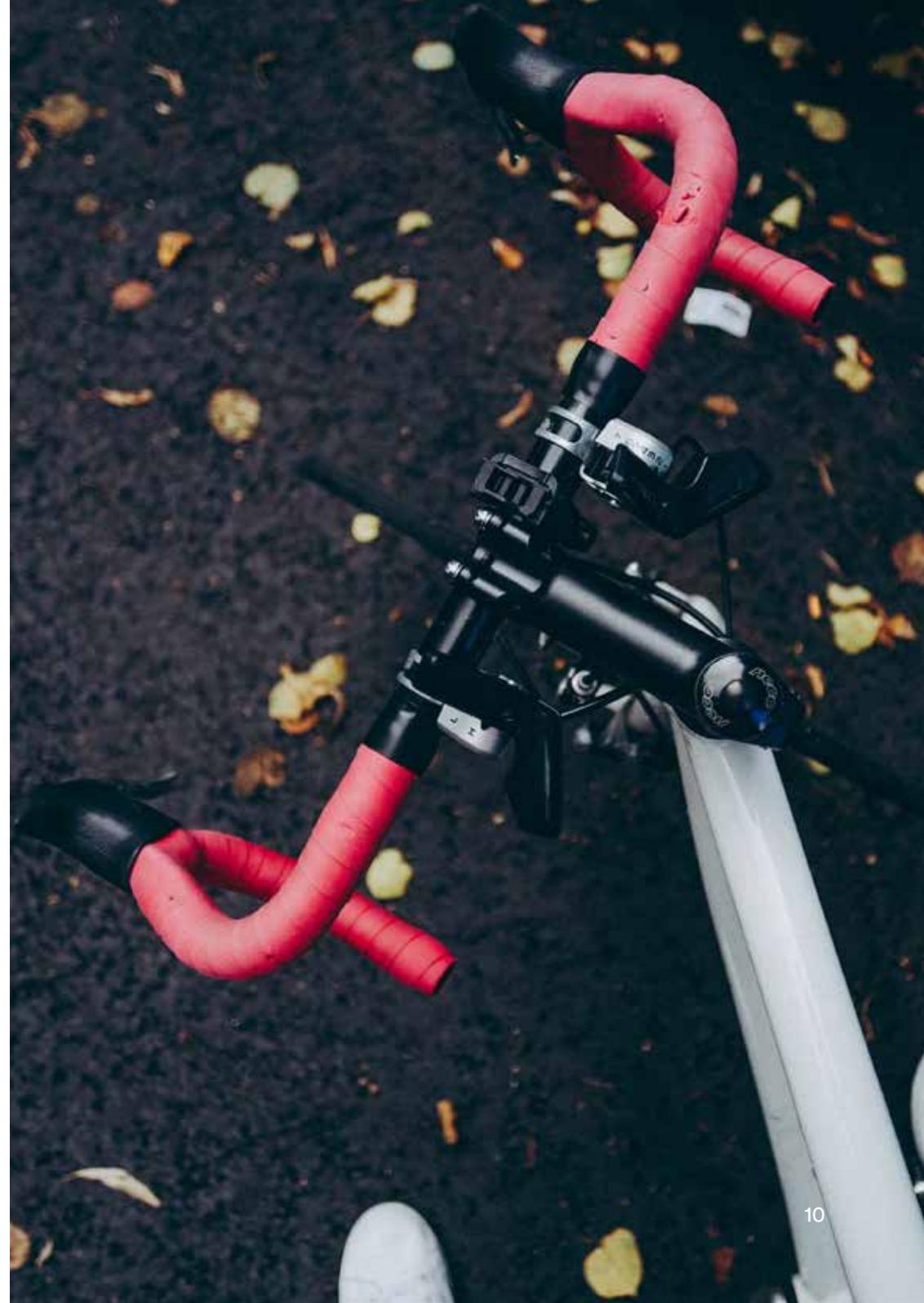
There are also a couple of KSI clusters with fatal collisions; one on the dual carriageway A457 Soho Way between Smethwick Rolfe Street railway station and the roundabout at the B4136 junction, and the other in the vicinity of Dudley Road East which is in a built up area.

CYCLING

There are no provisions for cyclists along Tipton Road/ Sedgeley Road. The area near the A457/A4123 junction will see an increase in housing development over the next few years and the junction will cause even greater severance for residents.

There are narrow lanes around the Oldbury section of the route causing limitations for the safe movement of cyclists. In addition, Bromford Road also provides key access for cyclists to West Bromwich. Within Smethwick, there are limited facilities which will cause challenges when new housing developments are constructed.

In Birmingham, the A457 has no provision for cycling but the canal towpath runs parallel for some distance.



The A457 and BB4125 are well served by a number of high frequency bus services operating every 10-30 minutes. These services provide access to Birmingham City Centre, Smethwick, Oldbury, Tipton and Dudley, Birmingham City Hospital and other communities for retail, leisure (including Barclaycard Arena and the Hawthorns) and employment areas.

The average bus speed along this route is 7.8mph (data taken from the 87 bus route).

The average total number of daily bus trips is 24,862.

The route from Birmingham to Dudley is identified as part of the Core Bus Network in the West Midlands Strategic Transport Plan – Movement for Growth but is not identified for Sprint investment.

The West Coast Main Line railway runs parallel to this route from Wolverhampton to Birmingham with intermediate stations at Tipton, Dudley Port, Sandwell and Dudley, Smethwick Galton Bridge and Smethwick Rolfe Street, providing frequent services giving access to Birmingham, Wolverhampton, London and the regions.

The following stations on this line have park and ride facilities:

- Wolverhampton
- Coseley
- Tipton
- Dudley Port
- Sandwell & Dudley
- Smethwick Galton Bridge

Table 3: Main Bus Routes

Road(s) Served	Frequency	Route No.
A457/A4030/B4125/A427 Tividale - Oldbury - Smethwick - Birmingham	Every 10 mins	87
B4125 Cape Hill - Birmingham	Every 10 mins	82
B4125 Cape Hill - Birmingham	Every 30 mins	89
A457 Sedgley – Dudley Port	Every 30 mins	229

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

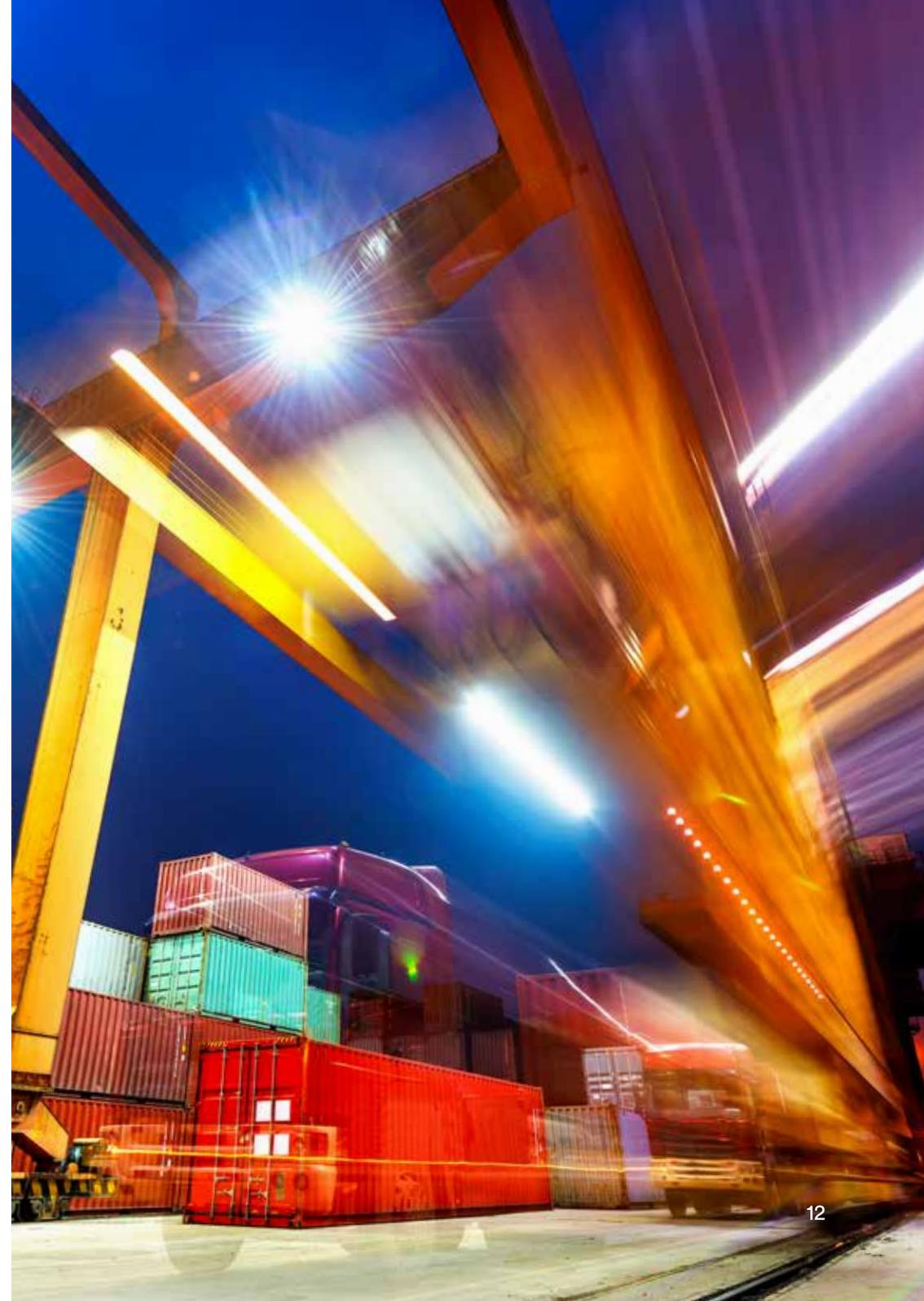
The West Midlands Rail Franchise proposes an improved local rail service frequency between Birmingham and Shrewsbury via Wolverhampton and Telford.

There are no plans for Midland Metro along this route but the extension of Midland Metro between Wednesbury and Brierley Hill will cross the route at Dudley Port. That scheme is identified in the HS2 Connectivity Package.

The AADF data for 2016 has been used to analyse HGV flows on each respective route. The average number of Heavy Goods Vehicles using the route on a daily basis was 722, which represents 4% of all vehicular traffic. On this route where HGV flows are high, the following sections have flows in excess of 1,000 per day:

- A4252 between the M5 and Smethwick Galton Bridge
- A467 Smethwick-Oldbury
- A4182 Trinity Way-Oldbury

This high volume of HGVs is largely due to the route's link to M5 Junction 1, which is utilised to transport goods to the South-West, or links to the M6 to transport freight to the north. Fleet data on road haulage companies was obtained for Midlands Connect from UK Trade and Investment (UKTI) and mapping these illustrated that a substantial proportion of road haulage companies in the Midlands are dotted along this route for ease of access to the M5.



Resilience

The route contains parallel strategic routes in some sections and has parallel strategic roads such as A41 Holyhead Road in Birmingham, A456 Hagley Road/A4123 Wolverhampton Road. There is a considerable degree of resilience contained within the Black Country and Birmingham networks. However, certain critical sections can cause grid-lock, particularly where routes combine into Birmingham City Centre and where routes narrow such as when crossing canal bridges.

There is some intermodal network resilience through the parallel West Coast Main Line with intercity and local services, and local stations within the corridor. There needs to be more parking capacity provided at stations to provide more network resilience.

Given the existing capacity constraints in the peaks in the Birmingham and Black Country highway network, a restriction on any of the roads will have considerable adverse implications for journey times on the remainder of this route and surrounding routes.

Diversion Route

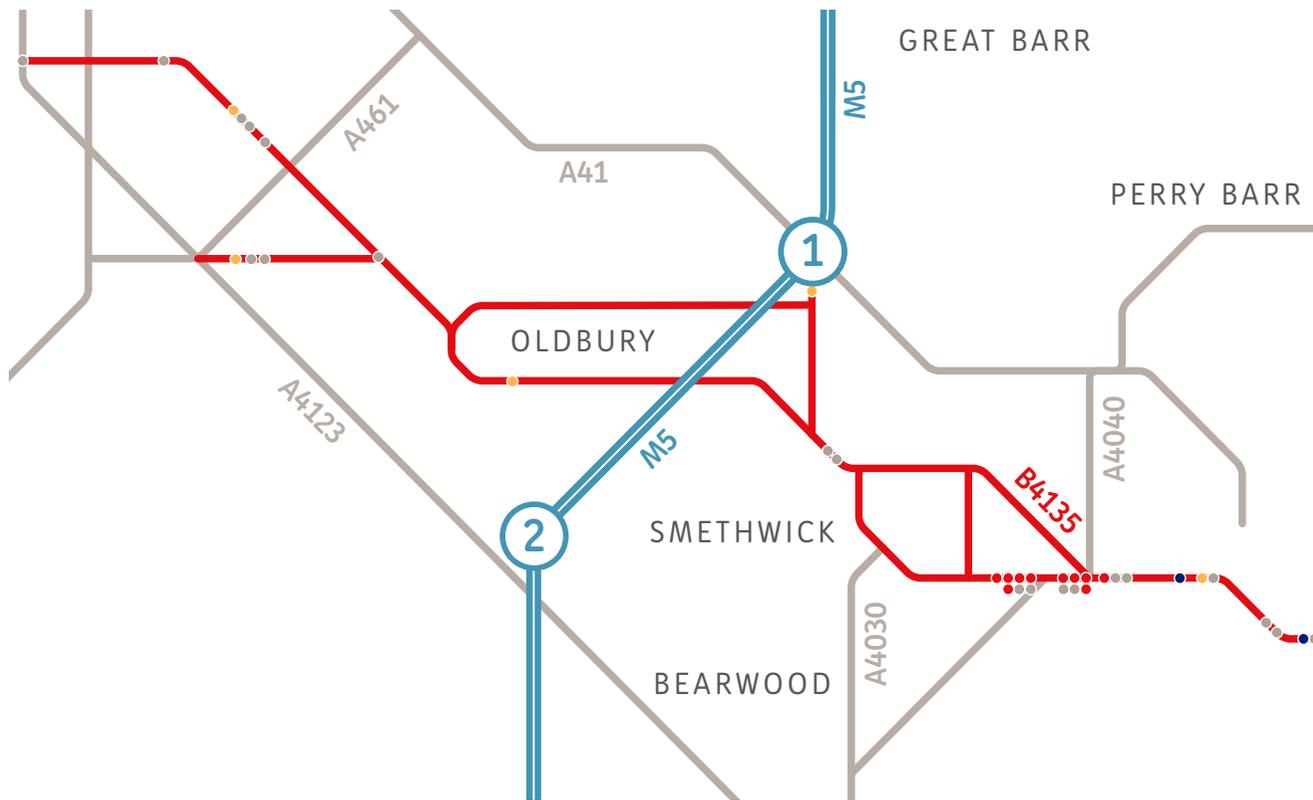
The section of the A457 between Oldbury and Smethwick Galton Bridge is used as part of an Emergency Diversion Route (EDR) by Highways England when there are closures or incidents on the M5 motorway between junctions 1 and 2.

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 flooding zones located along this route:

- A457 Soho Way
- A4030 Smethwick
- A457 Tipton Road between the A4033 and Dudley Port.

West Midlands Key Route Network Sedgely to Birmingham



Key

Roads	— The Route
	— Strategic Road Network operated by Highways England
Asset Location & Conditions (where known & information available)	● CCTV
	● Variable Message Signs (VMS) locations
	● Automatic Number Plate Recognition (ANPR) / Journey Time Monitoring System (JTMS) locations
	● Traffic Camera locations

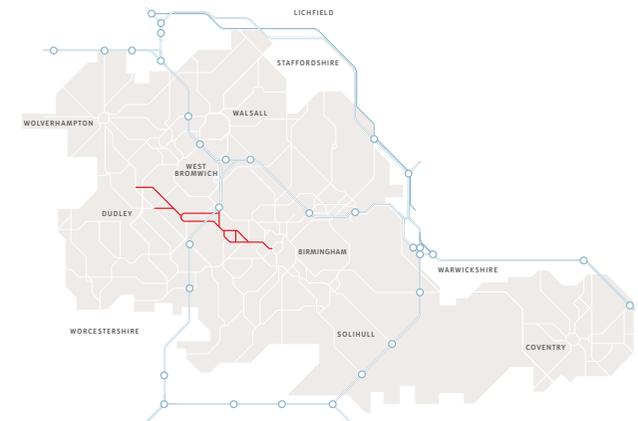
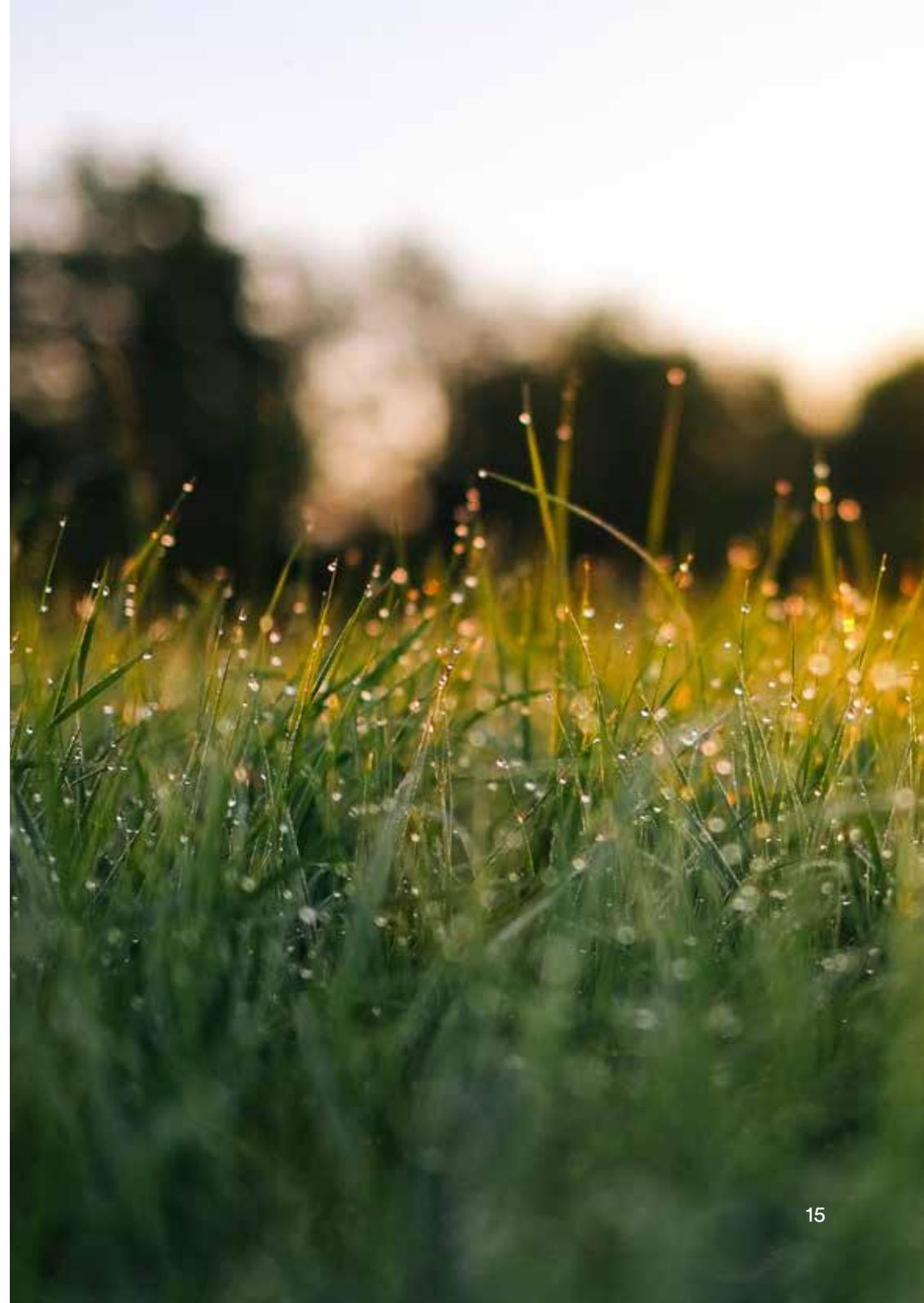


Figure 4

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.

Female and male healthy life expectancies are some of the lowest in the WMCA area along the length of the A457 between Birmingham and Oldbury. Some communities just south of Oldbury and along the A457 have relatively higher rates of childhood obesity. Similarly, the A457 north of Dudley and at the junction with the A463, the route passes through communities with higher rates of childhood obesity than the WMCA average.

The route falls within the Birmingham Air Quality Management Area (AQMA), declared for Nitrogen Oxide (NO₂) and Particulate Matter (PM₁₀), as well as the Sandwell AQMA, declared for NO₂ only. 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 across this route is in a good and safe condition. Over the past five years there has been a systematic planned programme of capital maintenance carried out on the A457, A4182, A4252 and B4135.

Footway Condition

The footways across the Sedgley to Birmingham route are in a generally poor but safe condition. There is no systematic planned programme of capital maintenance carried out on the A457, A4182, A4252 and B4135. Any defective footway repairs are identified and carried out on a reactive basis.

Structures

There are 11 highway structures identified consisting of 10 bridges and 1 tunnel on the Sedgley to Birmingham route, which are systematically inspected and maintained. The overall condition of these structures varies from fair to very good.

Refer to the Technical Annex for further details on asset condition.



Development proposals directly affecting this route

Housing

- Icknield Port Loop 300 dwellings (2017–20)
- Icknield Port Loop/ Heath Street / City Hospital 2050 dwellings (2020–30)
- Wider Smethwick Area 760 dwellings (2020 – 2025)

Employment

- Wider Handsworth Area 3,000 jobs (2017–30)
- Wider Oldbury Area 3750 jobs (2017–30)

Development proposals indirectly affecting this route

Housing

- Oldbury Road 670 dwellings (2025–30)

Employment

- Arena Central 4500 jobs (2017–30)
- Paradise Circus 4000 jobs (2017–25)
- Great Barr Street 2,000 jobs (2017 – 2020)
- Beorma Quarter 4,000 jobs (2017 – 2020)
- Eastside Locks 3,500 jobs (2017 - 2020)
- Dudley Town Centre 10500 jobs (2017–30)
- West Bromwich 11500 jobs (2017–30)
- Former Gulf Oil Depot 900 jobs (2017 – 2030)
- Brierley Hill Enterprise Zone 7,000 jobs (2017 – 2020)
- Wider Digbeth Area 7000 jobs (2020–30)
- Exchange Square/Masshouse Circus (2020–25)
- Masshouse Circus 8,500 jobs (2025–30)

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

- Birmingham Cycle Revolution (A34)
- Snow Hill Lines
(Platform 4 Reinstatement and Signalling Works & Rowley Regis Turn back local enhancement)

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>