

West Midlands Key Route Network

Pensnett to Oldbury Route



Transport for
West Midlands

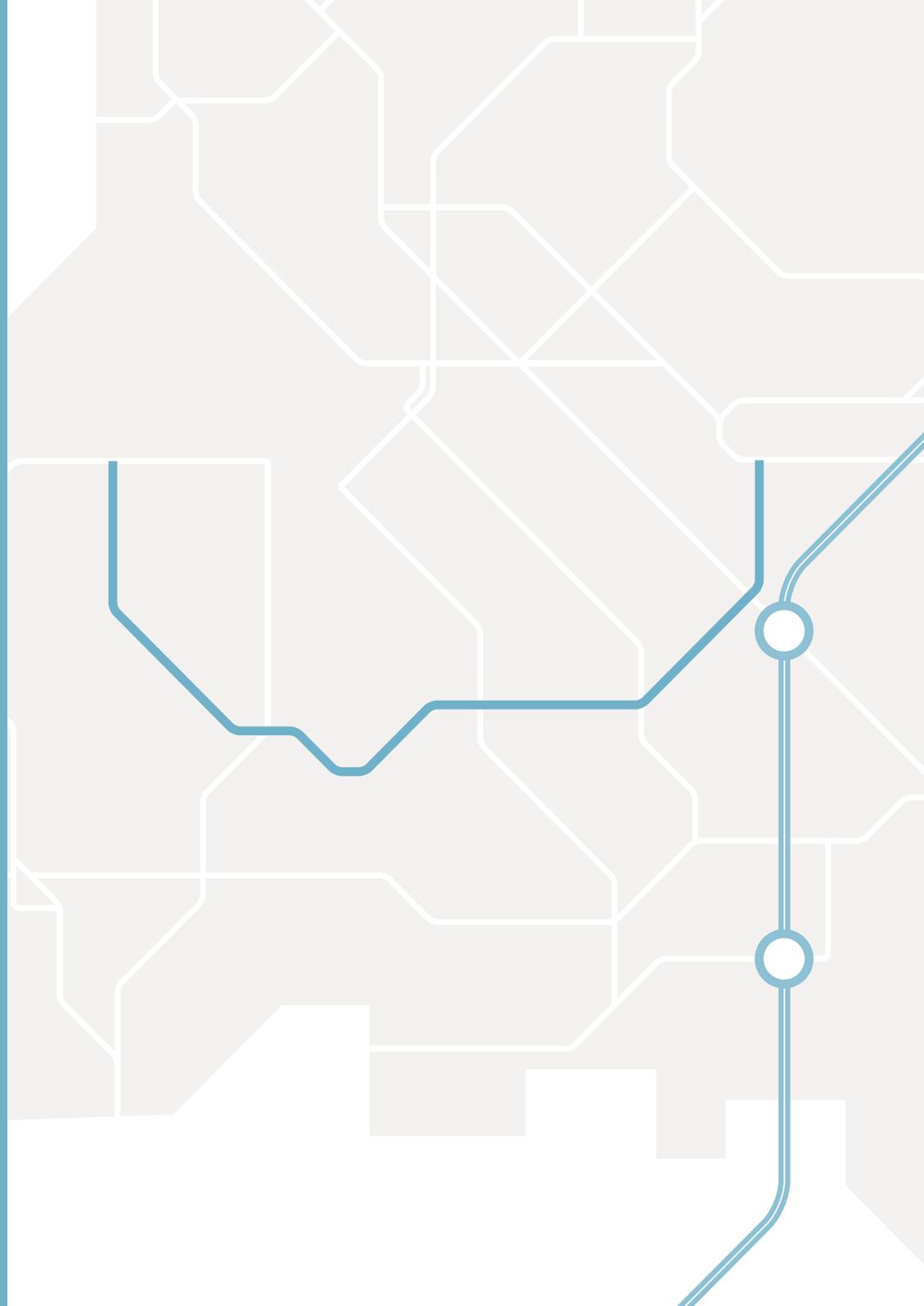
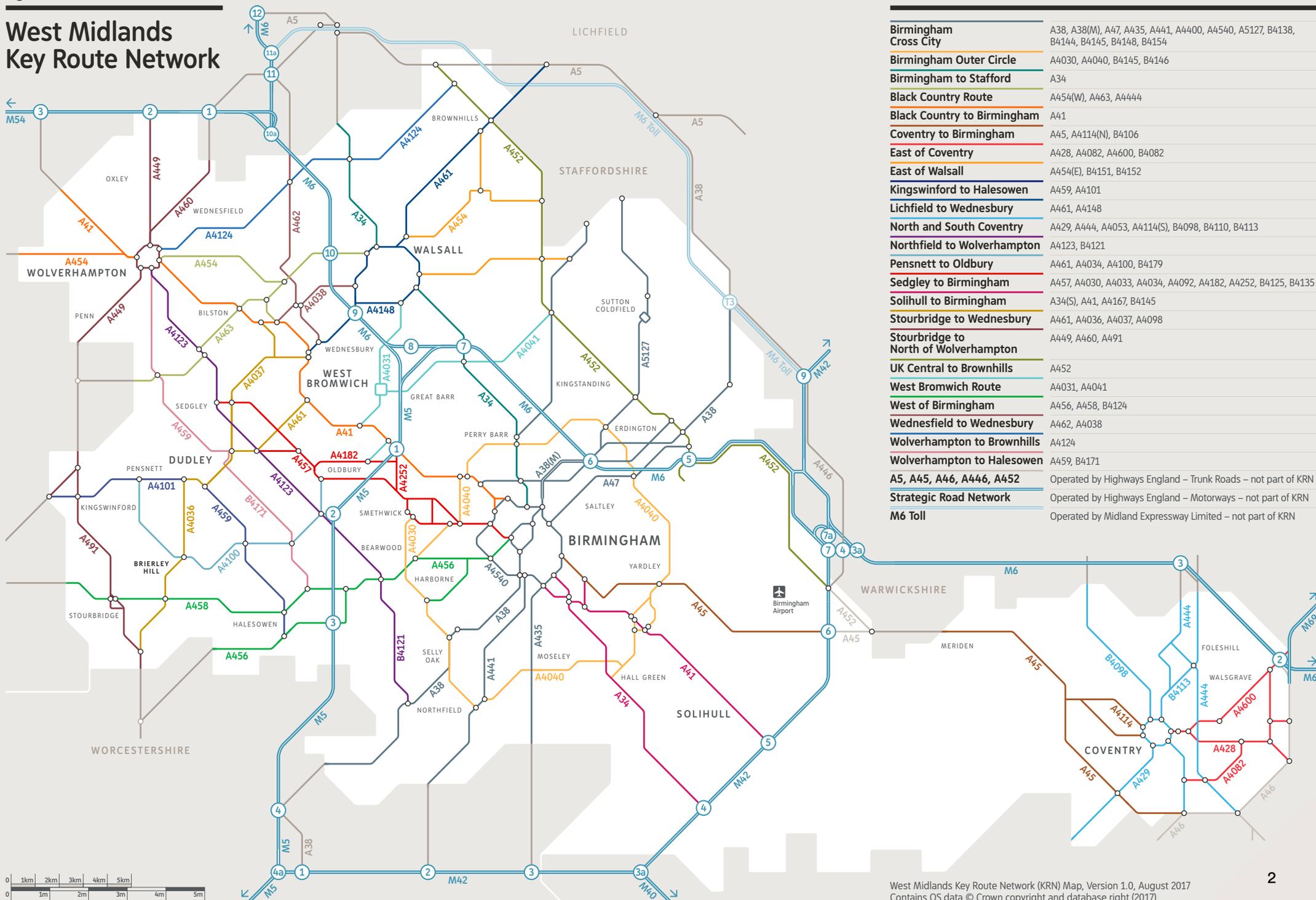


Figure 1

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 Pensnett to Oldbury route is a 9 mile/14km section of the West Midlands Key Route Network (KRN), providing strategic cross boundary access within the Black Country between Sandwell and Dudley. This is an essential link for connecting the key strategic centres of Brierley Hill, Cradley Heath, Blackheath and Oldbury to other locations within the Black Country.

Across the region the route also provides important link access to the other Black Country towns, Birmingham City Centre and to the Counties of Staffordshire and Worcestershire. It also serves a vital function in enabling access for local communities to retail, employment and education opportunities. The route directly serves one of the largest shopping centres in the UK, Intu Merry Hill, which has an annual footfall of 21 million. In April 2017 Dudley Metropolitan Borough Council launched its DY5 Business and Innovation Enterprise Zone, located in the strategic centre of Brierley Hill served by this route.

The Pensnett to Oldbury route is formed of the B4179, A461, A4100, and the A4034. The route has no connections to the Strategic Road Network (SRN). However, the route does form a number of crucial connections to other routes on the KRN. These are:

Kingswinford to Halesowen

- A4101 High Street/B4179 Commonsie
- A4100 Reddal Hill Road/A459 Halesowen Road

Stourbridge to Wednesbury

- A4100 Mount Pleasant/A4036 Merry Hill

Wolverhampton to Halesowen

- A4100 High Street/B4171 Birmingham Road

Northfield to Wolverhampton

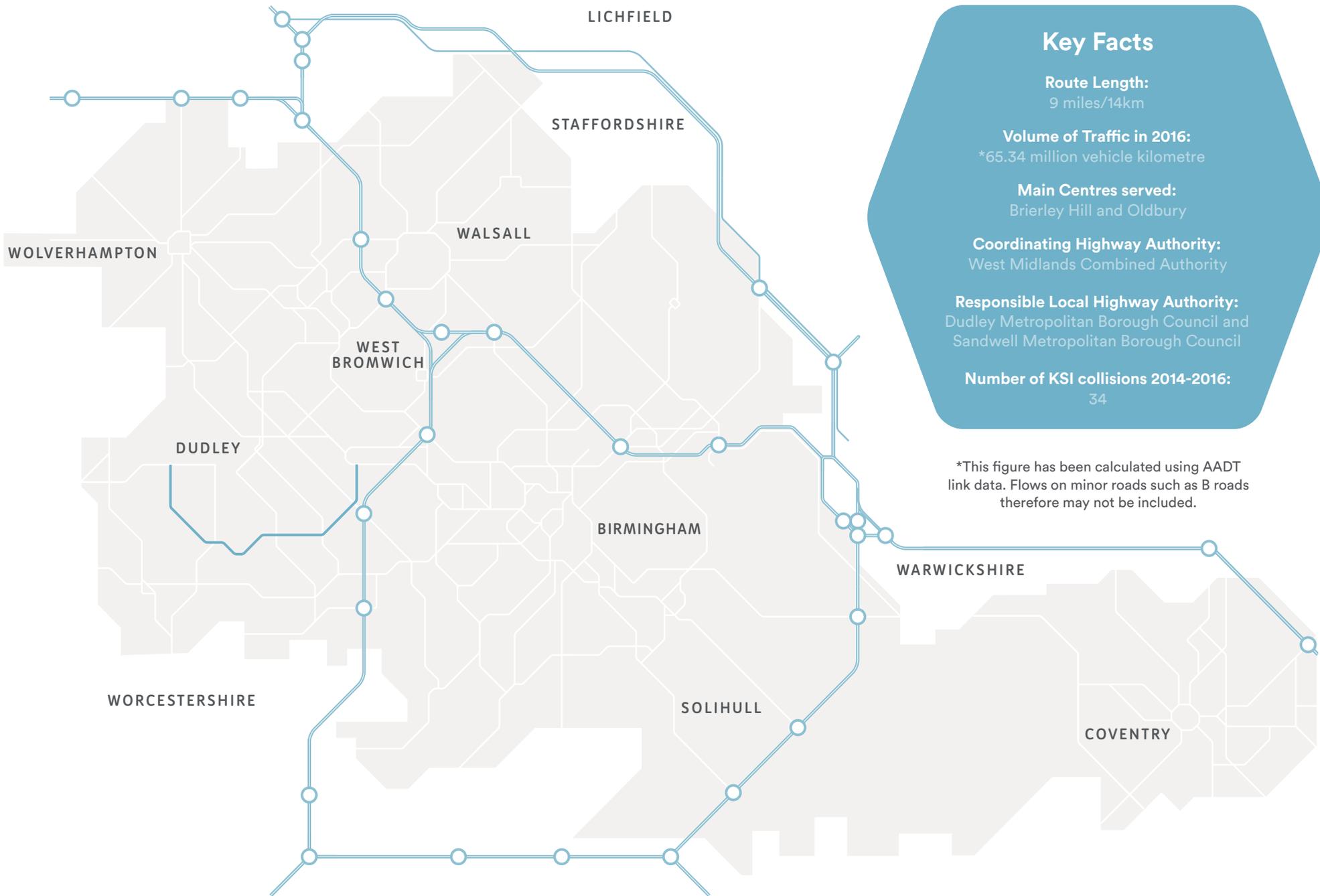
- A4034 Birchfield Lane/ A4123 Birchley Island

Sedgley to Birmingham

- A4034 Oldbury Road/A457 Birmingham Road

This route serves predominately residential communities and industries throughout its length. It is mostly single carriageway throughout, with the exception of short lengths of dual carriageway on the A4100 south of Merry Hill and the A4034 approach to Oldbury. On the B4179 properties are situated close to the edge of the carriageway and there are waiting restrictions in place throughout. The short section of the A461 on this route serves commercial, industrial and retail businesses which are well setback from the carriageway.

From the junction of Ventura Way with the A461, the A4100 section of this route is a wide section with properties well set back from the carriageway with off-street parking. The carriageway flares to dual where the A4100 approaches the A4036. Through Quarry Bank High Street the A4100 narrows and serves local businesses which are right on the edge of the carriageway. Through Cradley Heath the characteristics of the route are similar serving residential, commercial and industrial properties. The A4034 section from Blackheath to Oldbury is a mix of dual and single carriageways serving residential communities.



Key Facts

- Route Length:**
9 miles/14km
- Volume of Traffic in 2016:**
*65.34 million vehicle kilometre
- Main Centres served:**
Brierley Hill and Oldbury
- Coordinating Highway Authority:**
West Midlands Combined Authority
- Responsible Local Highway Authority:**
Dudley Metropolitan Borough Council and Sandwell Metropolitan Borough Council
- Number of KSI collisions 2014-2016:**
34

*This figure has been calculated using AADT link data. Flows on minor roads such as B roads therefore may not be included.

Figure 2

Congestion, Delay, Reliability

This route represents 2% 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 13,300 vehicles, a maximum of 24,000 with an average of 17,900 AADF.

The route experiences large volumes of traffic, particularly on:

- B4179 Commonside/Pensnett Road between its junctions with Blewitt Street and High Street, Brierley Hill;
- A461 Venture Way and A4100 Mill Street through Brierley Hill;
- A4100 Powke Lane/High Street in Blackheath; and
- A4034 Birchfield Lane/Oldbury Road between its junctions with the A4100 Archer Way and A457 Birmingham 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
B4179	Commonside/Pensnett Road, Queen Street, Pensnett, to A461 Venture Way, Brierley Hill	Eastbound
A4100	High Street/Mount Pleasant/Mill Street, New Street, Quarry Bank, to A461 Venture Way, Brierley Hill	Westbound
A4100	Mill Street/Mount Pleasant/High Street, The Boulevard, Brierley Hill to Sheffield Street, Quarry Bank	Eastbound
A4100	Powke Lane/High Street, Yew Tree Lane to B4171 Birmingham Road, Blackheath	Eastbound
A4100	High Street/Powke Lane, B4171 Birmingham Road to Holly Road, Blackheath	Westbound
A4034	Oldbury Road, A4100 Archer Way, Blackheath, to A4123 Birchley Island	Eastbound
A4034	Oldbury Road, Birchfield Lane, Oldbury, to A4100 Archer Way, Blackheath	Westbound
A4034	Churchbridge, Park Lane to A4123 Birchley Island, Oldbury	Westbound

Peak hour journey time on the sections of the route experiencing the highest delays has been found to be 100% higher than (i.e. 2 times) the equivalent free flow time, which is based on the average journey time between 22:00 – 06:00.

A particular impact of this congestion is to create problems with access to Russells Hall Hospital and Oldbury Business Parks, Cradley Heath Business Parks, Brierley Hill Business Parks, and Pensnett Trading Estate where businesses may supply or rely on just-in-time deliveries.

Congestion also has significant adverse impact on access to the Merry Hill Shopping Centre.

Table 2: PM Peak Congestion-Related Delays

Road	Location	Direction
B4179/A461	Pensnett Road/Venture Way, B4180 High Street, Brockmoor, to A4100 Mill Street, Brierley Hill	Eastbound
A4100/A461/B4179	Mill street/Venture Way/Pensnett Road, The Boulevard, Brierley Hill to B4180 High Street, Brockmoor	Westbound
A4100	Mount Pleasant, Amblecote Road to A4036 Merry Hill, Quarry Bank	Eastbound
A4100	High Street, B4174 Lyde Lane to A4036 Merry Hill, Quarry bank	Westbound
A4100	Powke Lane/High Street, Yew Tree Lane to B4171 Birmingham Road, Blackheath	Eastbound
A4100	High Street/Powke Lane, B4171 Birmingham Road to Holly Road, Blackheath	Westbound
A4034	Oldbury Road, Birchfield Lane, Oldbury, to A4100 Archer Way, Blackheath	Westbound
A4034	Birchfield Lane, Borough Crescent, to A4123 Birchley Island	Eastbound
A4034	Churchbridge, A457 Birmingham Road to A4123 Birchley Island, Oldbury	Westbound

Average Speeds

The average speed for this route in the AM Peak varies considerably across its length.

The average speed on the route is 20-30 mph. The worst performing sections where average speeds are below 10 mph are as follows:

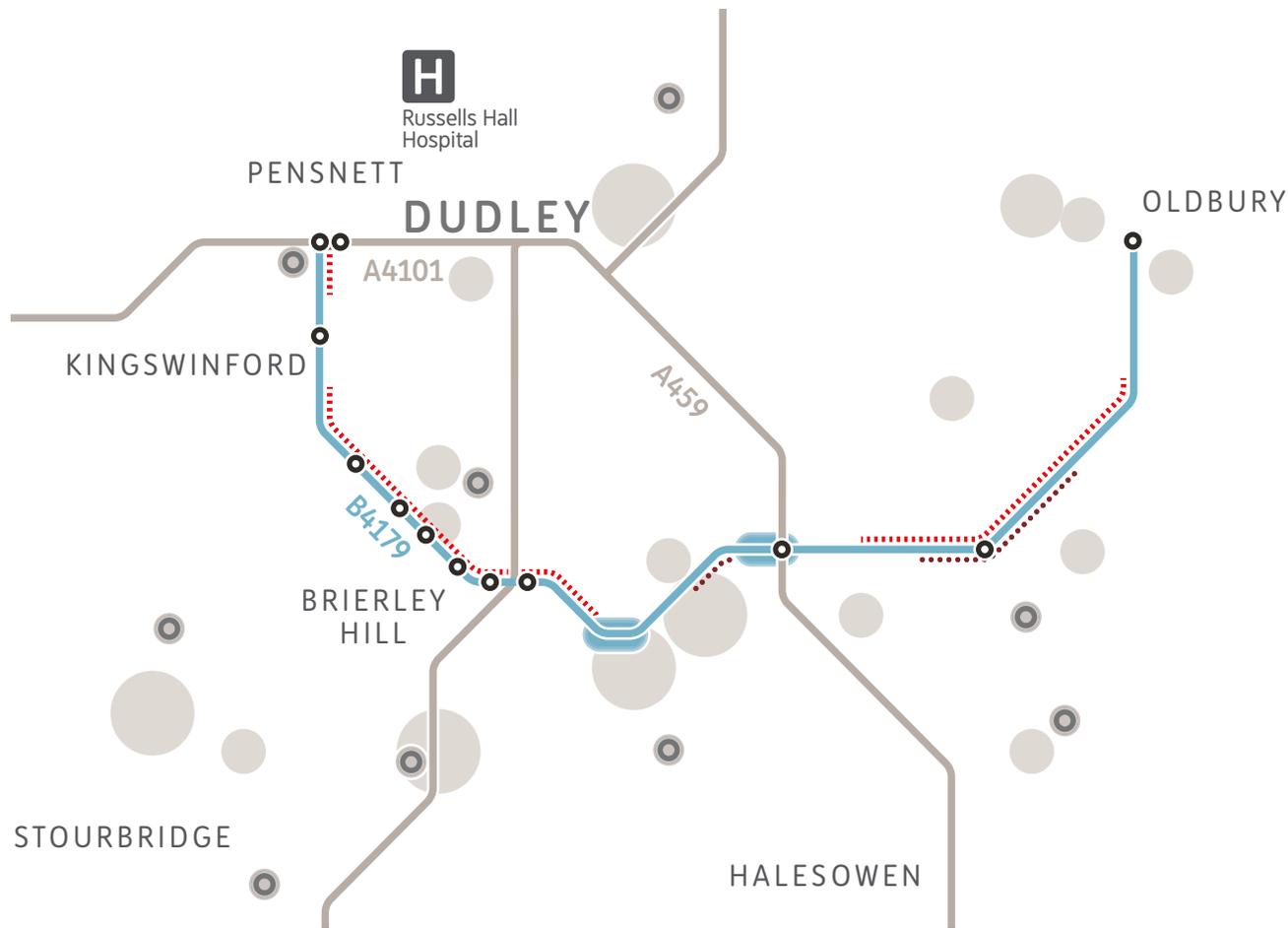
- B4179: B4180 Leys Rd - Dudley Rd/ High St
- Venture Way, Brierley Hill
- A4100: A4036 Merry Hill - B4174 Lyde Green
- A4100 High St - A4034 Station Rd/Brittania Rd
- A4034: Throne Rd - Wolverhampton Rd
- A4034: Park St - Birchley Island

Junction Capacity Issues

There are currently several junctions along this route where the evidence suggests there are capacity issues restricting the free flow of traffic. These are:

- A4034 Birchfield Lane/A4123 Wolverhampton Road
- A4100 Henderson Way/Birmingham Road
- A4100 Highgate Street/Halesowen Road
- A4100 High Street/Park Road/Oak Street
- A4100 High Street/A4036 Merry Hill
- A4100 Mount Pleasant/ Amblecote Road/Delph Road
- A4100 Mill Street/The Boulevard
- A4100 Mill Street/A461 Venture Way
- A461 Venture Way/ Level Street
- B4179 Commonside/Bromley/Blewitt Street
- B4179 Commonside/A4101 High Street

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Key

Roads	The Route
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 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 on this route:

Collisions

- 100 collisions, involving 194 vehicles
- Main contributory factor: Failed to look properly (pedestrian) (2% of all collisions)
 - The Killed and Seriously Injured (KSI) ratio for this group is 7% with 17% of all serious collisions being attributed to this group.
- Main contributory factors
 - Careless or Reckless or In a hurry (Driver) (7% of all collisions)
 - Exceeding speed limit (5% of all collisions)

Casualties

- Total casualties: 140
- Killed and Seriously Injured: 14
(10 of all casualties, up 1% when compared to 2015 figure of 9 of 96)
 - Killed: 0 (0% of all casualties, down by 2%)
 - Seriously injured: 14 (10% of all casualties, up by 3%)
- Slight: 126 (90% of all casualties)

Casualty Types

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

- Pedestrians: 15 (a reduction of 0.1% compared to 2015)
- Powered Two wheel vehicles: 14 (a reduction of 10% compared to 2015)
- Pedal cyclists: 8 (a reduction of 3% compared to 2015)
- Car occupants: 94 (an increase of 12% compared to 2015)

KSI Clusters

There are a number of KSI collisions along this route and there is a cluster of fatal collisions on the A4034 near Thorne Road at Oldbury. This is a built up residential area with on-street parking.

CYCLING

There is limited provision for cycling along this route. There is also limited accessibility via active travel to Cradley Heath, Old Hill and Rowley Regis Rail Stations. Rowley Regis station has a state of the art cycle hub for secure cycle parking but there are limited safe routes to access the station.



Whilst there is no through service, the route is well served by a number of high frequency bus services operating every 6-30 minutes. These services provide access to the local centres at Brierley Hill, Cradley Heath, Blackheath and Oldbury, leisure destinations, employment sites, retail, including the Merry Hill Shopping Centre, and the surrounding communities.

The average bus speed along this route is 10mph (data taken from the 4M bus route).

The average total number of daily bus trips is 33,419.

Services between West Bromwich and Halesowen via Oldbury and Blackheath and between Brierley Hill and Penn via Pensnett feature in the West Midlands Strategic Transport Plan – Movement for Growth Core Bus Network, but are not identified for Sprint investment.

The Birmingham Snow Hill to Kidderminster and Droitwich Spa railway line runs within the route corridor between Cradley Heath and Langley Green with intermediate stations at Rowley Regis and Old Hill.

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

- Droitwich Spa
- Hartlebury
- Kidderminster
- Hagley
- Stourbridge Junction
- Lye

Table 3: Main Bus Routes

Road(s) Served	Frequency	Route No.
A4034 Blackheath - Oldbury	Every 6 mins	4/4H
A4100/A4034 Quarry Bank - Oldbury	Every 30 mins	4M
A4100 Quarry Bank - Old Hill	Every 20 mins	X10
B4179 Pensnett - Brierley Hill - Merry Hill	Every 30 mins	255
A4034 Blackheath - Rowley Regis	Every 30 mins	127
B4179 Pensnett - Brierley Hill - Merry Hill	Every 15 mins	222
A4100 Quarry Bank - Cradley Heath	Every 30 mins	129
A4100 Cradley Heath - Blackheath	Every 30 mins	289
A4100 Cradley Heath - Old Hill	Every 30 mins	243
A4100 Quarry Bank - Cradley Heath	Every 60 mins	208
A4100 Quarry Bank - Blackheath	Every 60 mins	24

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

- Cradley Heath
- Old Hill
- Rowley Regis
- Langley Green
- The Hawthorns

This route features within the West Midlands Strategic Transport Plan – Movement for Growth for investment to increase the service frequency. The plan also includes extension of the Metro to Brierley Hill and both schemes are included in the HS2 Connectivity Package.

The AADF data for 2016 has been used to analyse HGV flows on each respective route. This route is of relatively little importance for freight, although the A4036 which adjoins this route, connecting it to the Merry Hill Shopping Centre, is important for deliveries.

The average number of Heavy Goods Vehicles using the route on a daily basis was 201, which represents 4% of all vehicular traffic. On the route itself, only the A4034 between Oldbury and Blackheath experiences greater than 1,000 HGV flows per day according to the AADF data. The smaller roads on the route, such as Pensnett Road and High Street, are not covered by AADF data. The Pensnett Trading Estate, Wallows Industrial Estate and Grazebrook Industrial Park are all in close proximity to this route.



Resilience

The route has parallel strategic roads such as the A4123 Birmingham New Road, A461 Duncan Edwards Way and A4101 Kingswinford Road, as well as parallel local roads in each section. There is a considerable degree of resilience contained within the Black Country highway networks. However, certain critical sections can cause grid-lock, including the A4101 Pensnett High Street and the A4123/A4034 at Oldbury, potentially impacting on M5 Junction 2.

There is a lack of intermodal network resilience due to the lack of direct rail based transport options especially between Brierley Hill and Pensnett.

Given the existing capacity constraints in the peaks in the Black Country 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.

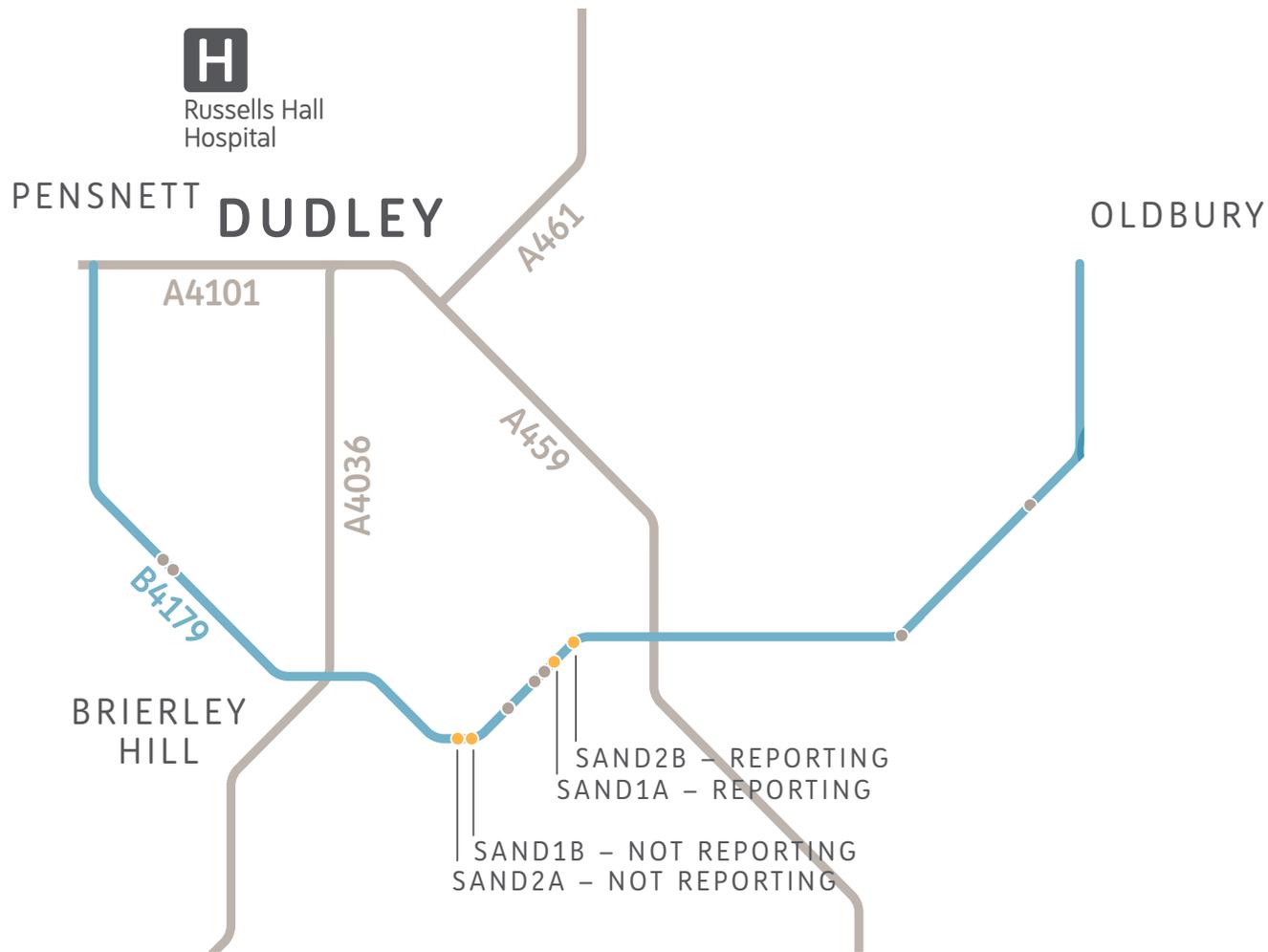
Diversion Route

This route does not form part of the Emergency Diversion Routes used Highways England.

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 two areas on this route that pose flood risk; both are located on the A4100.

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Key

Roads

— The Route

Asset Location & Conditions
(where known & information
available)

● Automatic Number Plate
Recognition (ANPR) /
Journey Time Monitoring
System (JTMS) locations

● Traffic Camera locations



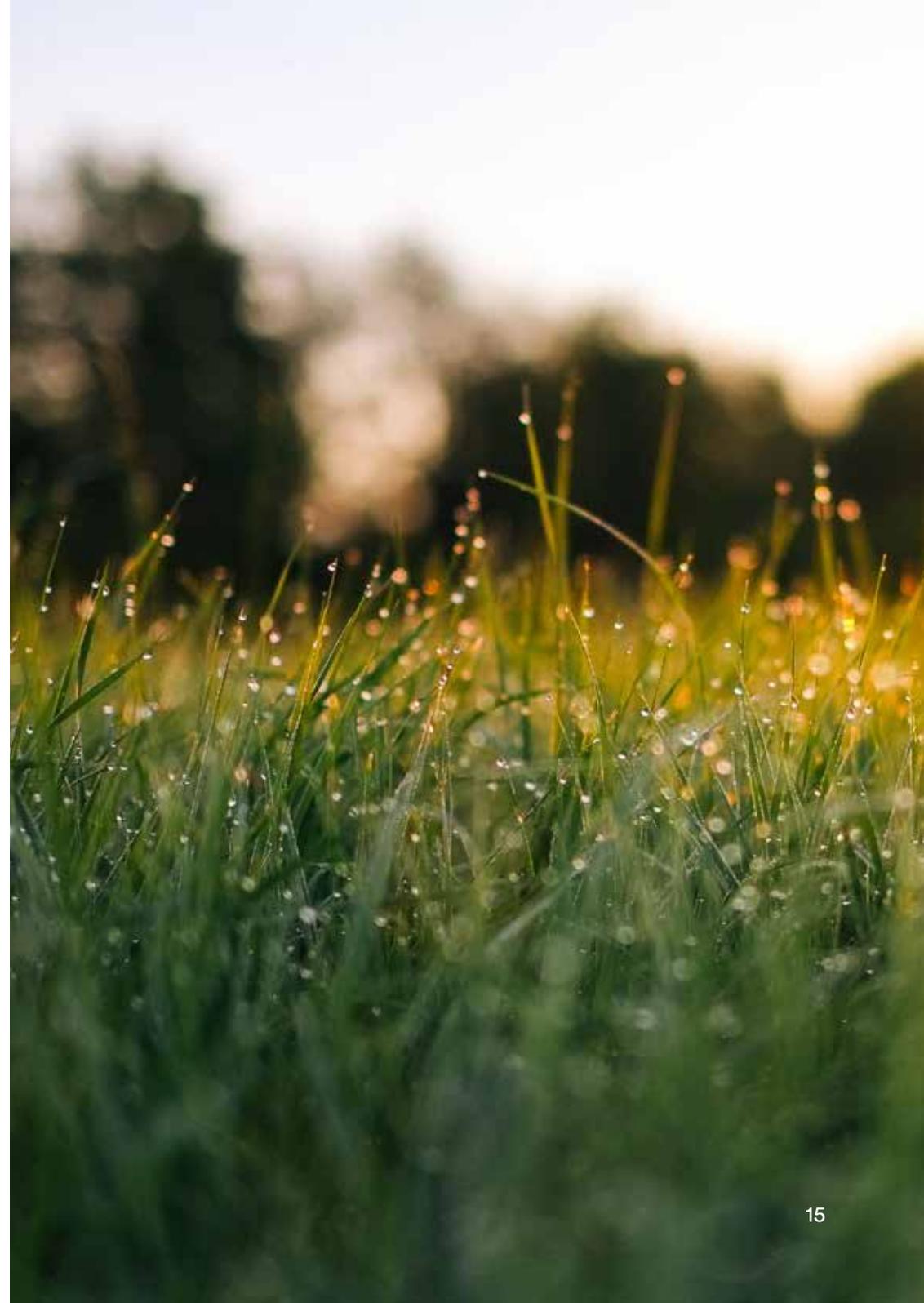
Figure 4

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.

Pensnett has lower healthy life expectancies than the national average of 83. Similarly, there are a larger proportion of households occupied by one person with a disability. Around Pensnett there are high levels of childhood obesity in year 6.

The route falls within the Air Quality Management Areas (AQMAs) of Sandwell and Dudley, declared for Nitrogen Oxide (NO₂).

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 varies in condition with some sections in a good and safe condition and others with significant maintenance planned over the next 2 years.

Footway Condition

The footways across the Pensnett to Oldbury route are in a generally poor but reasonably safe condition. There is no systematic planned programme of capital maintenance carried out across the route.

Structures

There are 4 highway structures identified consisting of 4 bridges on the Pensnett to Oldbury route, which are systematically inspected and maintained. The overall condition of these structures varies between fair and good.

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



Development proposals directly affecting this route

Housing

- Woods Lane 210 dwellings (2017–20)
- Brierley Hill Area Action Plan 925 dwellings (2020–25)

Employment

- Brierley Hill Enterprise Zone 7,000 jobs (2017–20)
- Wider Oldbury Area 3750 jobs (2017–30)

Development proposals indirectly affecting this route

Housing

- Wider Lye Area 530 dwellings (2017–25)

Employment

- West Bromwich 11500 jobs (2017–30)

Committed Transport Improvements

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

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

- 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>