

West Midlands Key Route Network

Northfield to Wolverhampton



Transport for
West Midlands

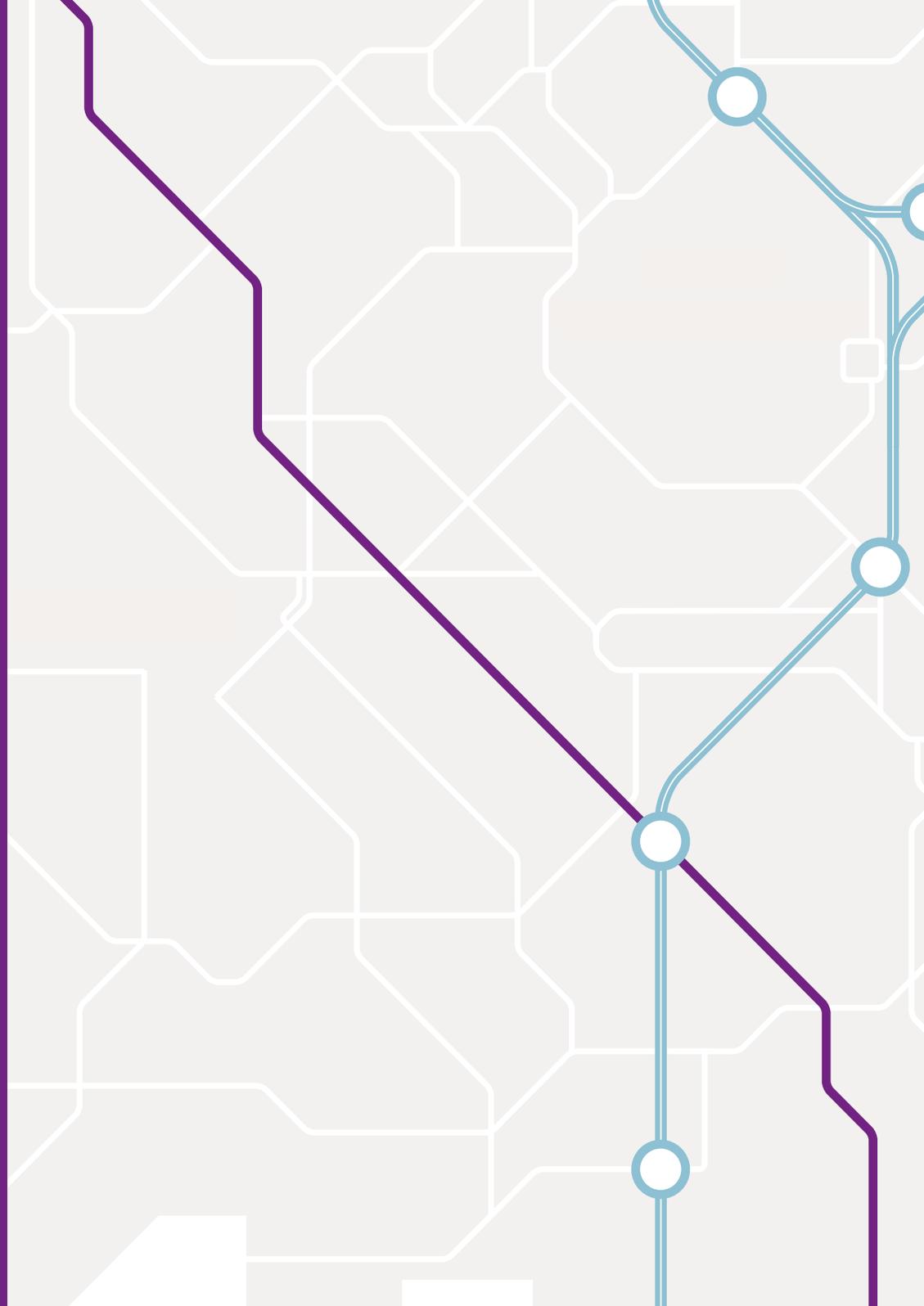
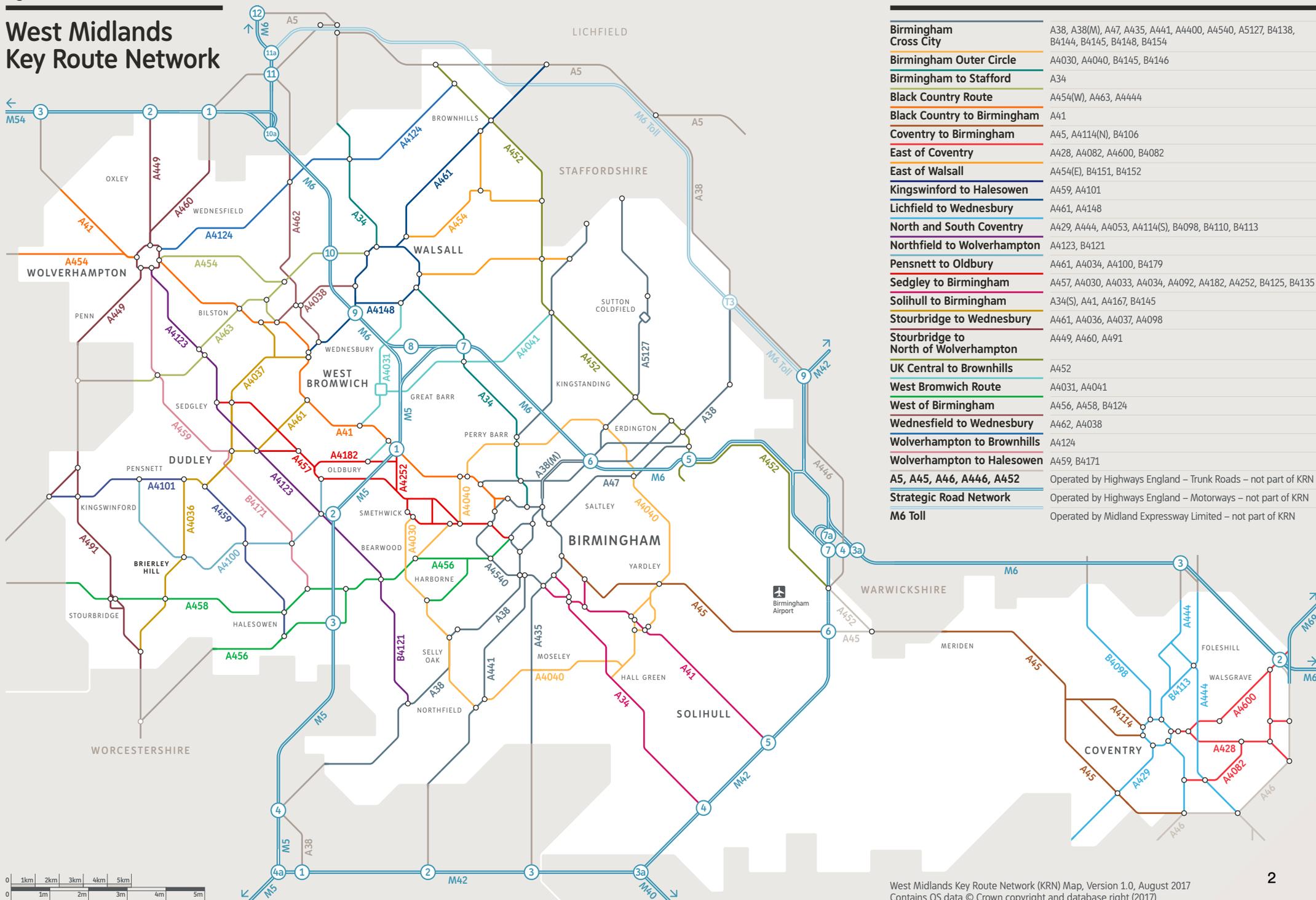


Figure 1

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 Northfield to Wolverhampton route is a 14 mile/23 km section of the West Midlands Key Route Network (KRN), providing long distance North Western to south-eastern connectivity, within the Western side of the Metropolitan area. It links key locations within the Black Country to the southern suburban areas of Birmingham and is essential for commuters, freight, regional tourist attractions and access to employment opportunities.

Across the region the route provides an important strategic link particularly for areas such as Wolverhampton, Dudley, Oldbury and Smethwick.

The Northfield to Wolverhampton route is formed of the A4123 and B4121.

It connects these areas directly to the strategic road network in Oldbury at M5 junction 2 (A4123 Birchley Island) enabling motorway access for the movement of goods and services from strategic employment sites, within the Black Country.

It also forms a number of crucial connections to other routes on the KRN. These are:

Black Country Route

- A4123 Birmingham New Road/A463 Black Country Route/A463 Shaw Road

Sedgley to Birmingham

- A4123 Birmingham New Road/A457 Sedgley Road

Stourbridge to Wednesbury

- A4123 Birmingham New Road/A461 Burnt Tree/Birmingham Road

Pensnett to Oldbury

- A4123 Wolverhampton Road/A4034 Birchfield Lane

West of Birmingham

- A4123 Wolverhampton Road/A456 Hagley Road West

Birmingham Cross City

- B4121 Bell Hill/A38 Bristol Road South

With the exception of where the route approaches the A4150 (Wolverhampton Ring Road), it is dual carriageway throughout. The A4123 is characterised by the presence of residential, industrial and commercial properties along its length. Within Dudley and Sandwell it also serves a number of locations that are of local importance for nature conservation.

The southern section of the route, the B4121 is primarily residential and provides access into the suburban area of Northfield which lies to the south of Birmingham City Centre.

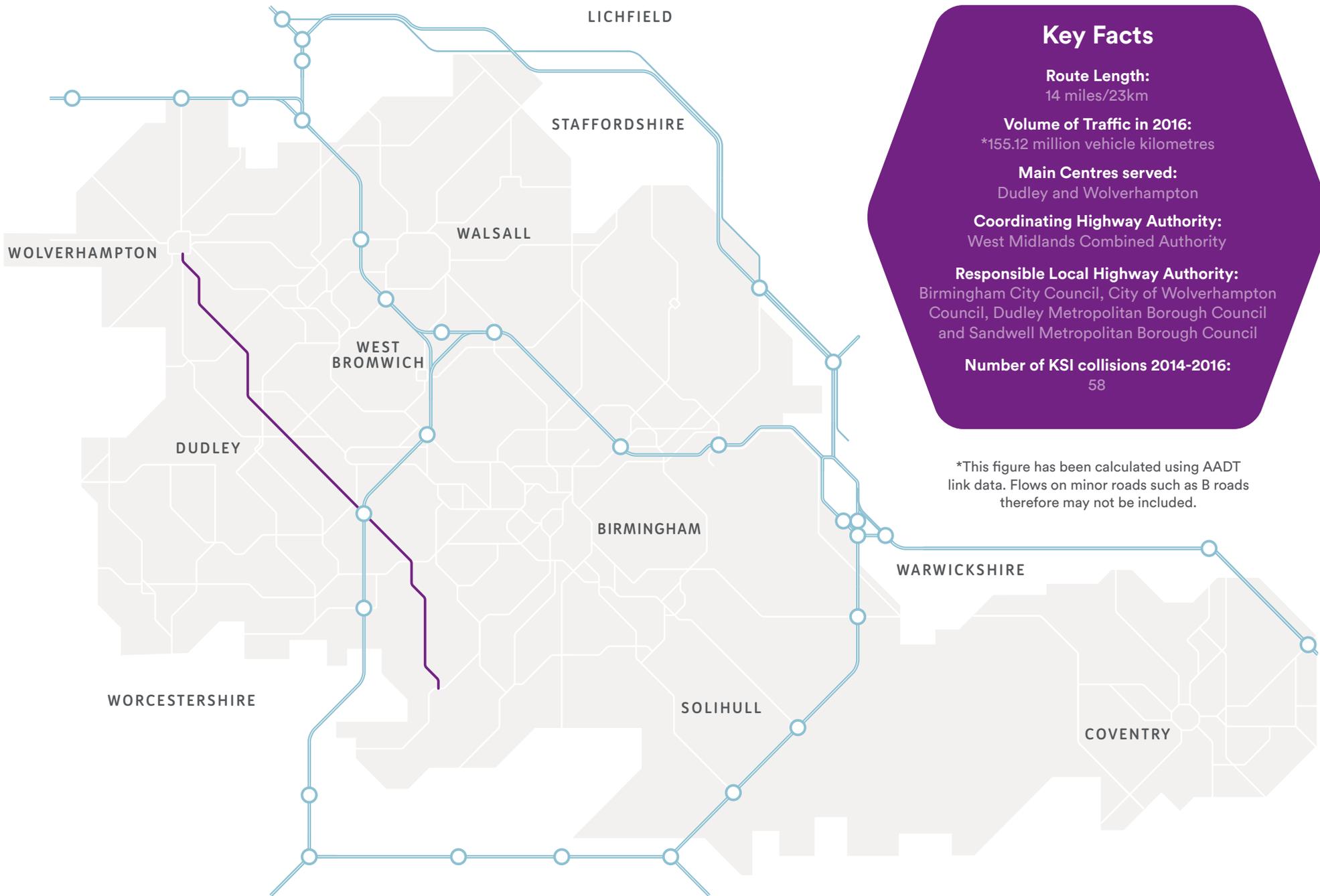


Figure 2

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 17,000 vehicles, a maximum of 35,000 with an average of 25,100 AADF.

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

On this route there is very little difference in terms of journey time in the AM and PM Peak. 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 on this route is to create problems with access to Wolverhampton Station and industrial areas south of Wolverhampton City Centre, Coneygre Industrial Estate and Oldbury industrial areas, where businesses may supply or rely on just-in-time deliveries.

Congestion also has adverse impact on access to major visitor attractions such as the Merry Hill Shopping Centre, Dudley Zoo and Castle and the Black Country Living Museum.

Table 1: AM Peak Congestion Related Delays

Road	Location	Direction
A4123	Wolverhampton Road South, Norman Avenue to A456 Hagley Road West, Warley	Northbound
A4123	Wolverhampton Road, Brook Park to B4169 Causeway Green Road, Oldbury	Northbound
A4123	Wolverhampton Road, St Michaels Crescent to Leahouse Road, Oldbury	Southbound
A4123	Wolverhampton Road, Titford Road to Birchley Island, Oldbury	Northbound
A4123	Wolverhampton Road, approach to Asda Oldbury	Southbound
A4123	Birmingham New Road/Wolverhampton Road, A4033 Tividale Road, Burnt Tree, to Birchley Island, Oldbury	Southbound
A4123	Wolverhampton Road, approach to Newbury Lane, Portway	Northbound
A4123	Birmingham New Road, Tower Road to City Road, Tividale	Northbound
A4123	Birmingham New Road, Regent Road to A461 Birmingham Road, Burnt Tree	Northbound
A4123	Birmingham New Road, Woodcroft Avenue access to A4037 Tipton Road, Dudley	Southbound
A4123	Birmingham New Road, Woodcroft Avenue access to A457 Sedgley Road, Roseville	Northbound
A4123	Birmingham New Road, Vicarage Road West to Mason Street, Roseville	Northbound
A4123	Birmingham New Road, Ivyhouse Lane to Mason Street, Coseley	Southbound
A4123	Birmingham New Road, approach to A463 Shaw Road, Woodcross	Northbound

ROUTE PERFORMANCE

Road	Location	Direction
A4123	Birmingham New Road, A463 Black Country Route to A4126 Rookery Road, Woodcross	Northbound
A4123	Birmingham New Road/Thompson Avenue/Birmingham Road/ Grove Street/Dudley Road, Lawneswood Avenue, Parkfields, to A4150 Ring Road St Johns, Wolverhampton	Northbound
A4123	Birmingham Road, A4150 Ring Road St Johns to Grove Street, Wolverhampton	Southbound

Average Speeds

The average speed for the route in the AM Peak is less than 20 mph throughout its busiest sections. The areas approaching the M5 at junction 2 are particularly slow during the morning peak period and can be as slow as less than 10 mph. There is very little change in average speed performance throughout the route in the PM Peak period. The worst performing sections where average speeds are below 10 mph are as follows:

- A4123 Wolverhampton Rd South: A456 - Norman Ave (Southbound Only)
- Birchley Island
- A4123 New Birmingham Road: Birmingham Rd/Burnt Tree - Hill Rd/Regent Rd
- A4123 Birmingham New Rd: A4168-A4037
- A4123 Birmingham New Rd - A463-A457

Table 2: PM Peak Congestion-Related Delays

Road	Location	Direction
A4123	Wolverhampton Road, Brook Park to B4169 Causeway Green Road, Oldbury	Northbound
A4123	Wolverhampton Road, Titford Road to Birchley Island, Oldbury	Northbound
A4123	Birmingham New Road/Wolverhampton Road, Lower City Street, Tividale, to Birchley Island, Oldbury	Southbound
A4123	Wolverhampton Road/Birmingham New Road, Birchley Island, Oldbury, to Lower City Street, Tividale,	Northbound
A4123	Birmingham New Road, Trafalgar Road to A461 Birmingham Road, Burnt Tree	Northbound
A4123	Birmingham New Road, Woodcroft Avenue access to A4037 Tipton Road, Dudley	Southbound
A4123	Birmingham New Road, A4037 Tipton Road, Dudley, to A457 Sedgley Road, Roseville	Northbound
A4123	Birmingham New Road, Vicarage Road West to Mason Street, Roseville	Northbound
A4123	Birmingham New Road, Ivyhouse Lane to Mason Street, Coseley	Southbound
A4123	Birmingham Road/Thompson Avenue/Birmingham New Road, A4150 Ring Road St Johns, Wolverhampton to A4039 Parkfield Road, Parkfield	Southbound
A4123	Birmingham Road/Grove Street/Dudley Road, Cartwright Street to A4150 Ring Road St Johns, Wolverhampton	Northbound

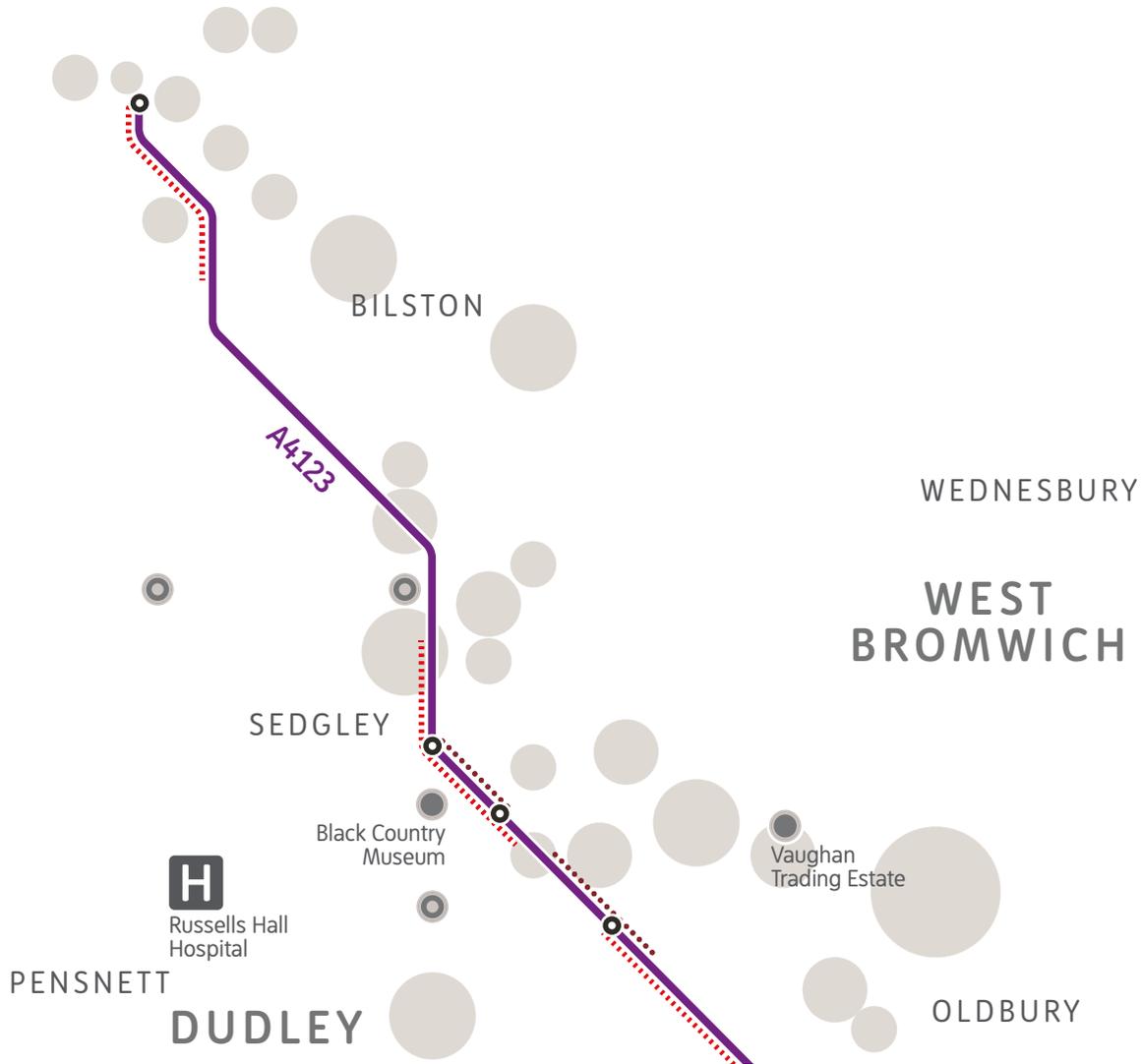
Junction Capacity Issues

There are currently some junctions along the route where the evidence suggest there are capacity issues restricting the free flow of traffic.

These are:

- A4150 Wolverhampton Ring Road/A4123 Birmingham Road junction
- A4123 Birmingham New Road/A463 Shaw Road junction
- A4123 Birmingham New Road/A4168 Priory Road junction
- A4123 Birmingham New Road/A4037 Tipton Road junction
- A4123 Birmingham New Road/Tividale Road junction
- A4123 Wolverhampton Road (Birchley Island)
- A4123 Wolverhampton Road/A456 Hagley Road West junction
- B4121 Bell Hill/A38 Bristol Road South junction

West Midlands Key Route Network Northfield to Wolverhampton



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

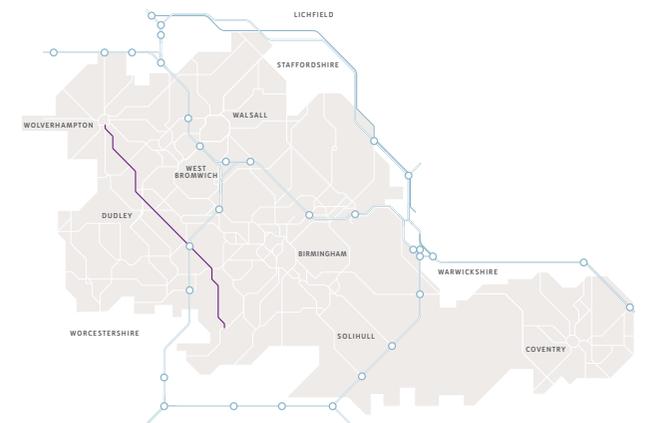
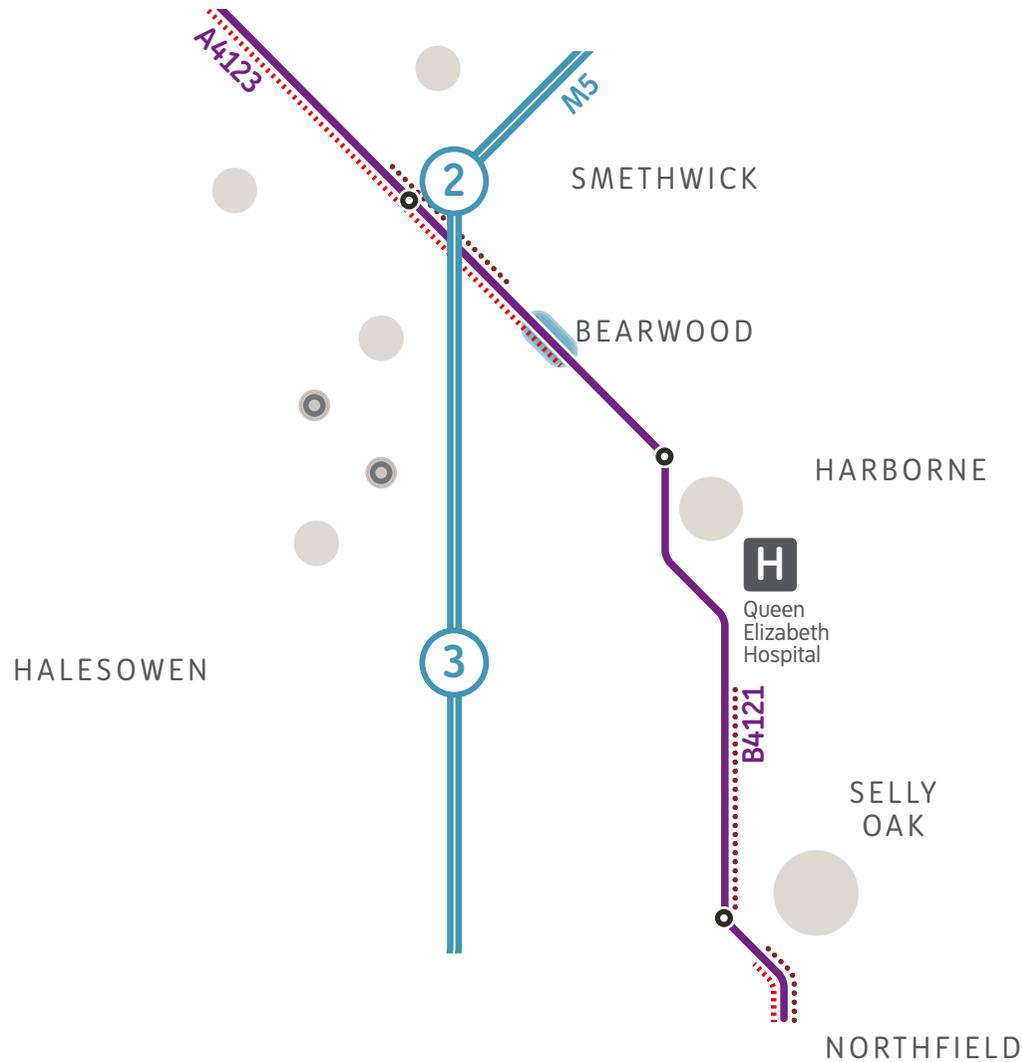


Figure 3 – 1 of 2

West Midlands Key Route Network Northfield to Wolverhampton



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

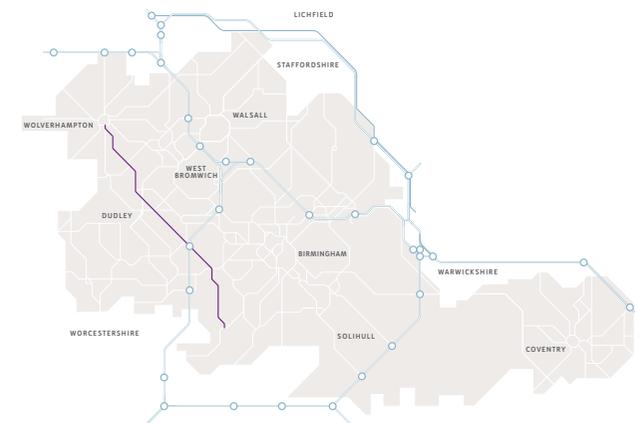


Figure 3 – 2 of 2

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

- 123 collisions, involving 242 vehicles
- Main contributory factor: Failed to look properly (pedestrian) (23% of all collisions)
 - The Killed and Seriously Injured (KSI) ratio for this group is 7% with 15% of all serious collisions being attributed to this group.
- Main contributory factors
 - Poor turn or manoeuvre (9% of all collisions, 50% of fatal collisions)
 - Failed to judge other persons path or speed (6% of all collisions)

Casualties

- Total casualties: 174
- Killed and Seriously Injured: 18 (10% of all casualties, down 8% when compared to 2015 figure of 33 of 186)
 - Killed: 2 (1% of all casualties, no variation from 2015)
 - Seriously injured: 16 (9% of all casualties, down by 8%)
- Slight: 156 (90% of all casualties)

Casualty Types

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

- Pedestrians: 17 (a reduction of 6% compared to 2015)
- Powered Two wheel vehicles: 9 (a reduction of 0.2% compared to 2015)
- Pedal cyclists: 3 (a reduction of 2% compared to 2015)
- Car occupants: 145 (an increase of 8% compared to 2015)

KSI Clusters

There are a number of KSI clusters along this route. Over the whole route there have been a total of 6 fatal collisions.

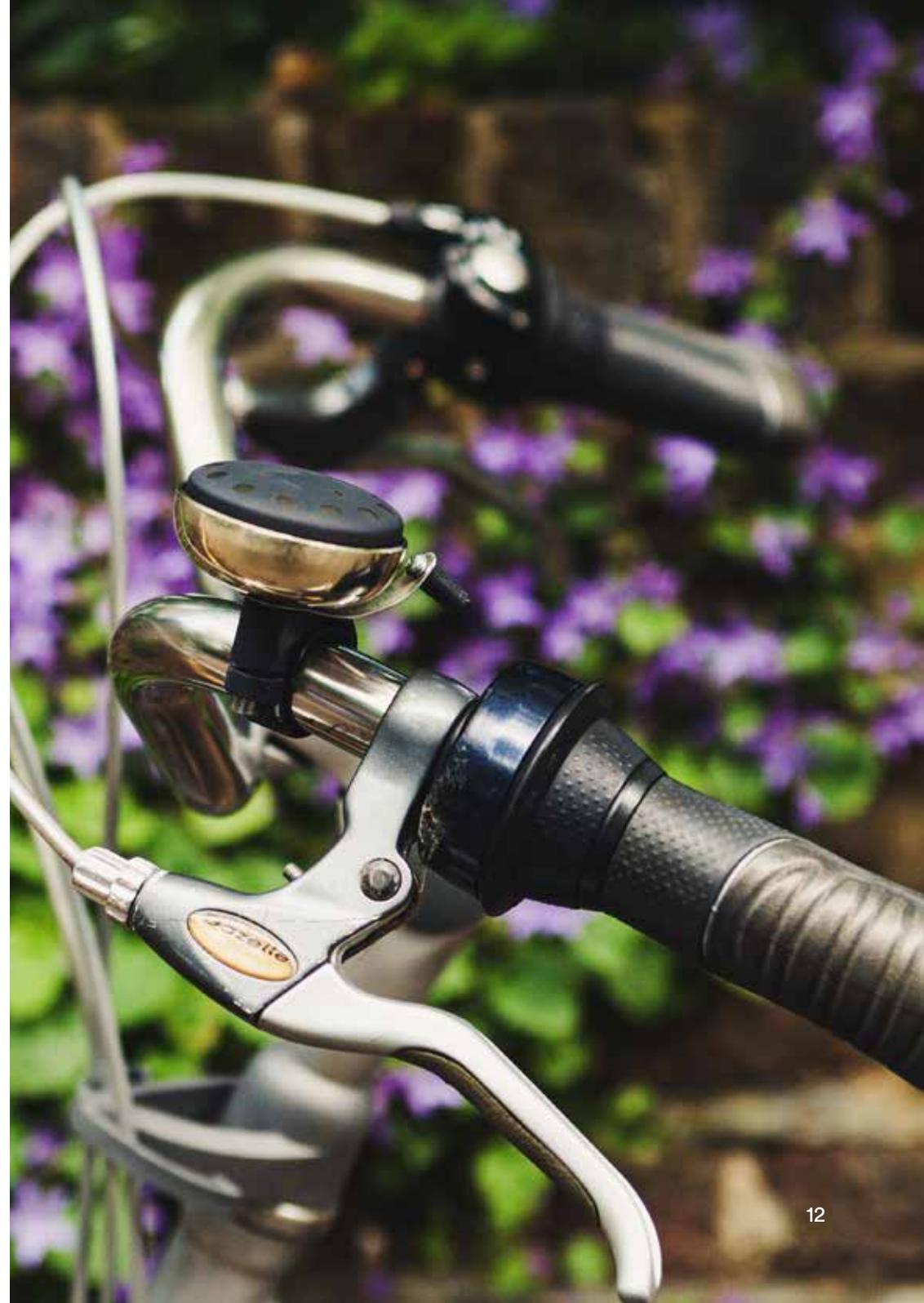
The route is a mix of built up residential and urban dual areas.

CYCLING

A multimodal study has been commissioned for the A4123 and the needs of cycling and walking along this route are included.

The section of A4123 in Sandwell has inconsistent provision but does include sections of segregated off road infrastructure for cycling. In addition within Sandwell, Birchley Island is a very busy junction that links to M5 Junction 2 and has no safe options for vulnerable users.

The section through Dudley has no provision for cycling and there are again inconsistent provisions within Wolverhampton. The junction at A4039 is constricted and pose a challenge for the safe movement of cyclists through this junction. North of Parkfield, the provisions is restricted due to on-road residential parking.



The route is well served by high frequency bus services providing access to Wolverhampton City Centre, Dudley and Birmingham City Centre.

The average bus speed along this route is 10.5mph (data taken from the 126 bus route).

The average total number of daily bus trips is 13,225 (route 126 included only).

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

In terms of rail the West Coast Main Line runs parallel to this route between Sandwell & Dudley and Wolverhampton with intermediate stations at Dudley Port, Tipton and Coseley, providing frequent services giving access to Birmingham, Wolverhampton, London and the regions. Of these stations the following have park and ride facilities:

- Sandwell & Dudley
- Dudley Port
- Tipton
- Coseley
- Wolverhampton

At present there are no plans to extend the Midland Metro along the route, but the proposed extension of the Midland Metro between Wednesbury and Brierley Hill will cross the route in the vicinity of Dudley Town Centre. This scheme is part of the HS2 Connectivity Package.

Table 3: Main Bus Routes

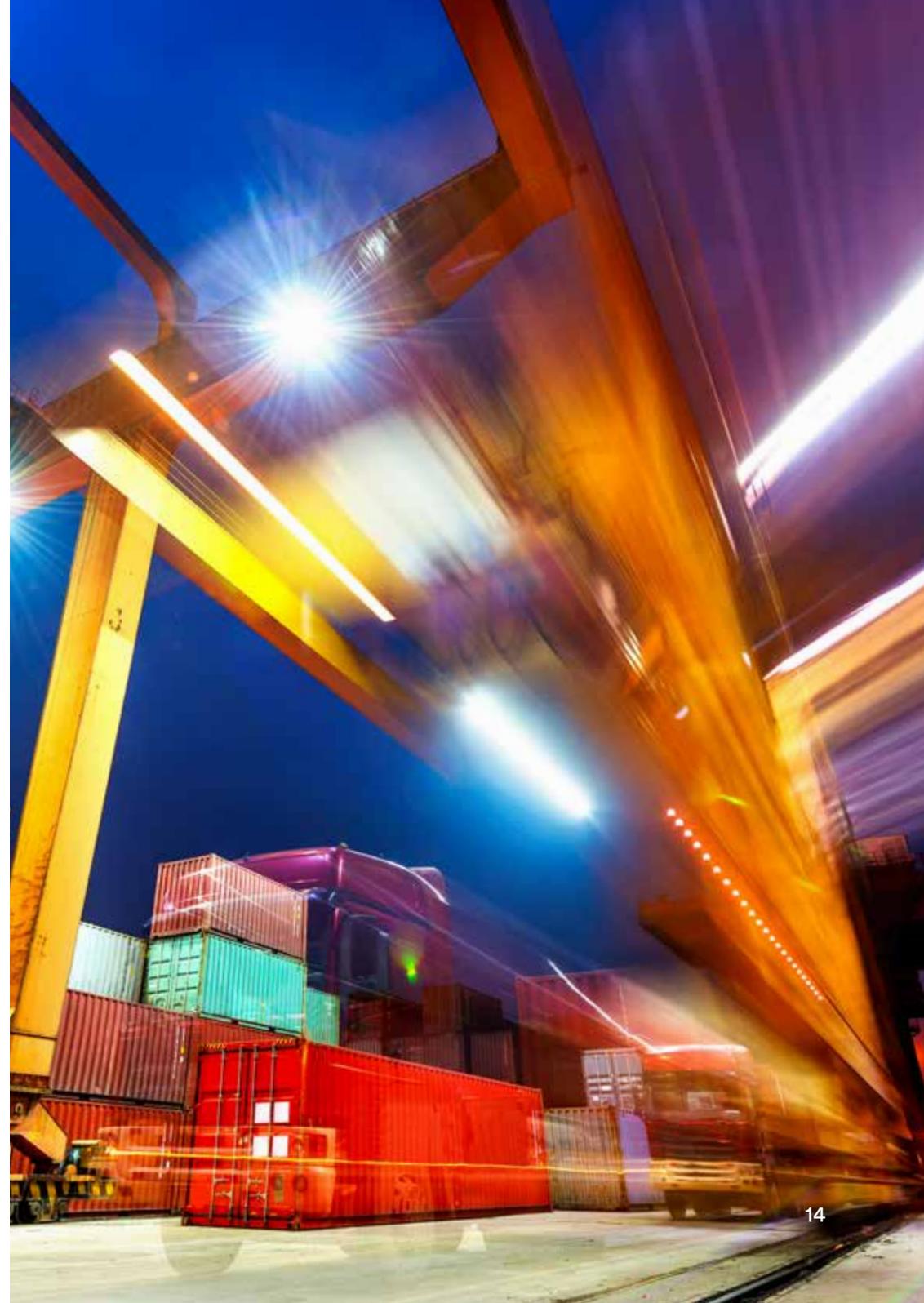
Road(s) Served	Frequency	Route No.
A4123 Ridgacre – Langley – Coseley - Wolverhampton	Every 10 mins	126
B4121 Northfield – Shenley Fields	Every 15-30 mins	29
B4121 Shenley Fields – Worlds End	Every 30 mins	39
B4121 Northfield – Shenley Fields	Every 30 mins	48
A4123 Parkfields - Wolverhampton	Every 30 mins	81

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

FREIGHT AND LOGISTICS

The AADF data for 2016 has been used to analyse HGV flows on each respective route. The majority of this route is of little importance to freight, with low HGV flows along most of the route. The average flow of Heavy Goods Vehicles using the route on a daily basis was 943, which represents 4% of all vehicular traffic. One particular section between the A4123 Tipton and Woodcross/A463 junction, has in excess of 1,000 HGV flows per day. This is due to Sandwell's position as a key freight hub within the region.

According to Cambridge Econometrics data, Sandwell employs large numbers in the metal industry, wholesale and retail trade and construction sectors, all of which rely on freight and logistics for effective operations. Sandwell is also one of the highest origins and destinations for intra-regional road freight (MDS data, research conducted for Midlands Connect).



Resilience

The route has parallel roads such as the A459 and A41/A4126 in the north, and the A4040 and Lordswood Road in the South. There is a considerable degree of resilience contained within the Birmingham and Black Country networks. However, certain critical sections can cause grid-lock, including the motorway network, particularly the New Birmingham Road through Tividale, which impacts on M5 Junction 2.

The route has poor intermodal network resilience due to the lack of parallel rail based transport especially in the south of the route.

Given the existing capacity constraints in the peaks in the Birmingham and Black Country networks, 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

In conjunction with the West of Birmingham KRN route, the southern section of the A4123 is used as an Emergency Diversion Route (EDR) by Highways England when there are closures or incidents between junction 2 and 3 of the M5 motorway.

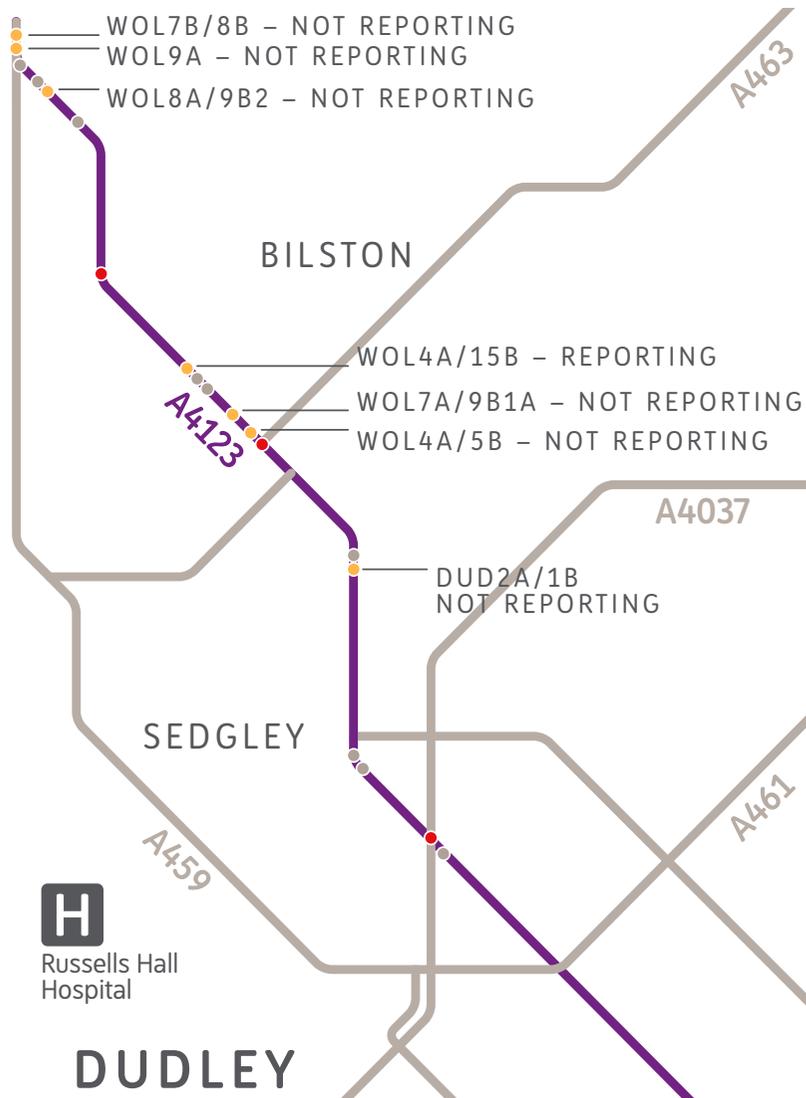
Additionally, informal diversion of traffic onto the A4123 occurs when there are problems between junctions 1 and 2 of the motorway.

Flooding

Flooding on this route impacts on the overall performance, safety of road users and affects the lives of those living in the vicinity. The evidence gathered indicates that there is one area on this route that pose a flood risk; which is:

- The section of the route in Sandwell along the A4123 south of the junction with Causeway Green Road.

West Midlands Key Route Network Northfield to Wolverhampton



Key

Roads

— The Route

Asset Location & Conditions (where known & information available)

● CCTV

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

● Traffic Camera locations

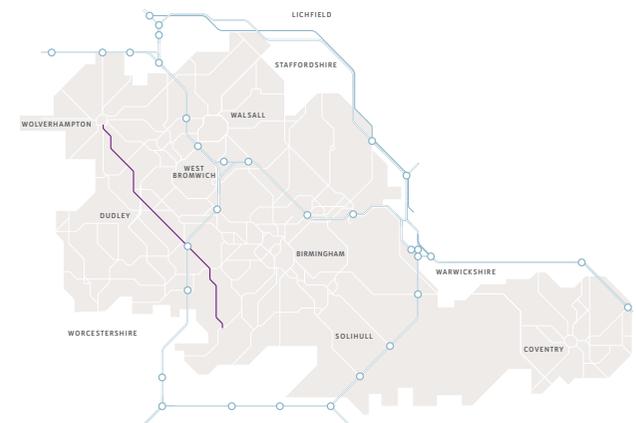


Figure 4 – 1 of 2

West Midlands Key Route Network Northfield to Wolverhampton

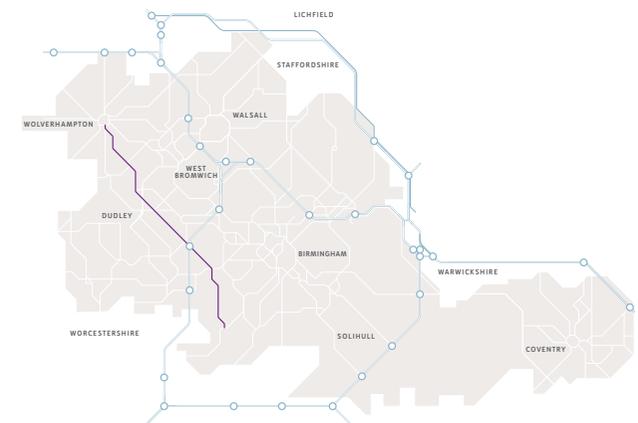
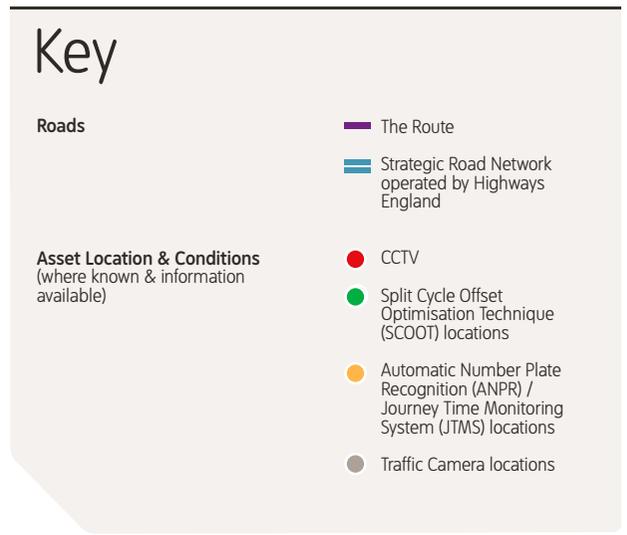


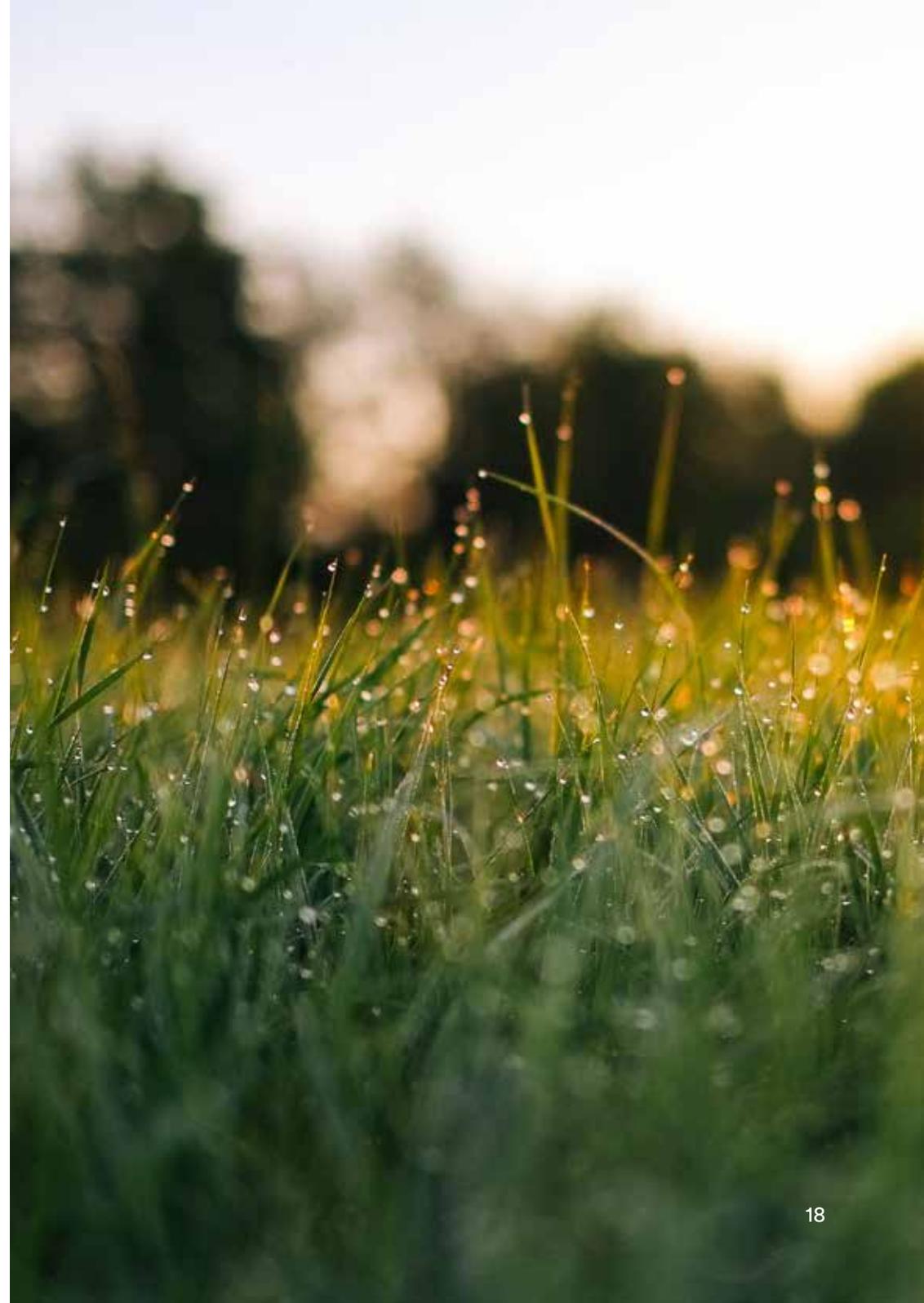
Figure 4 – 2 of 2

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 A4123 section of the route passes through the north of Dudley, where it meets the junction with the A463, it cuts through communities with higher rates of childhood obesity than the West Midlands Combined Authority average.

The route falls within the Sandwell and Wolverhampton Air Quality Management Areas (AQMA) declared for Nitrogen Oxide (NO₂). It also falls within Birmingham's AQMA which is declared for both NO₂ and Particulate Matter (PM¹⁰).

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 addressed 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 in critical condition. Over the past five years there has been a systematic planned programme of capital maintenance carried out on the A4123.

Footway Condition

The footway across the Northfield to Wolverhampton route is in a generally poor but safe condition. There is no systematic planned programme of capital maintenance carried out on the A4123. Any defective footway repairs are identified and carried out on a reactive basis.

Structures

There are 3 highway structures identified consisting of 2 bridges and 1 culvert on the Northfield to Wolverhampton route, which are systematically inspected and maintained. The overall condition of these structures is good.

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



Development proposals directly affecting this route

Housing

- Thompson Avenue 80 dwellings (2017–20)
- Coseley Ecopark 925 dwellings (2017–20)

Employment

- Wider Oldbury Area 3750 jobs (2017–30)
- Dudley Town Centre 10500 jobs (2017–30)
- Westside (Wolverhampton) 900 Jobs (2020–25)
- Southside and St George's Parade 5000 jobs (2020–25)

Development proposals indirectly affecting this route

Housing

- Ward Street / Polypipe 620 dwellings (2017–25)
- Former Royal Hospital 120 dwellings (2020–25)

Employment

- Wolverhampton Science Park 2400 jobs (2017–25)
- i54 3,000 jobs (2017–20)
- Wolverhampton Business Park 3300 jobs (2017–25)
- i54 6000 jobs (2020–30)
- Stafford Street 4000 jobs (2020–25)

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

- SPRINT: Dudley to Birmingham (via Hagley Road)

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>