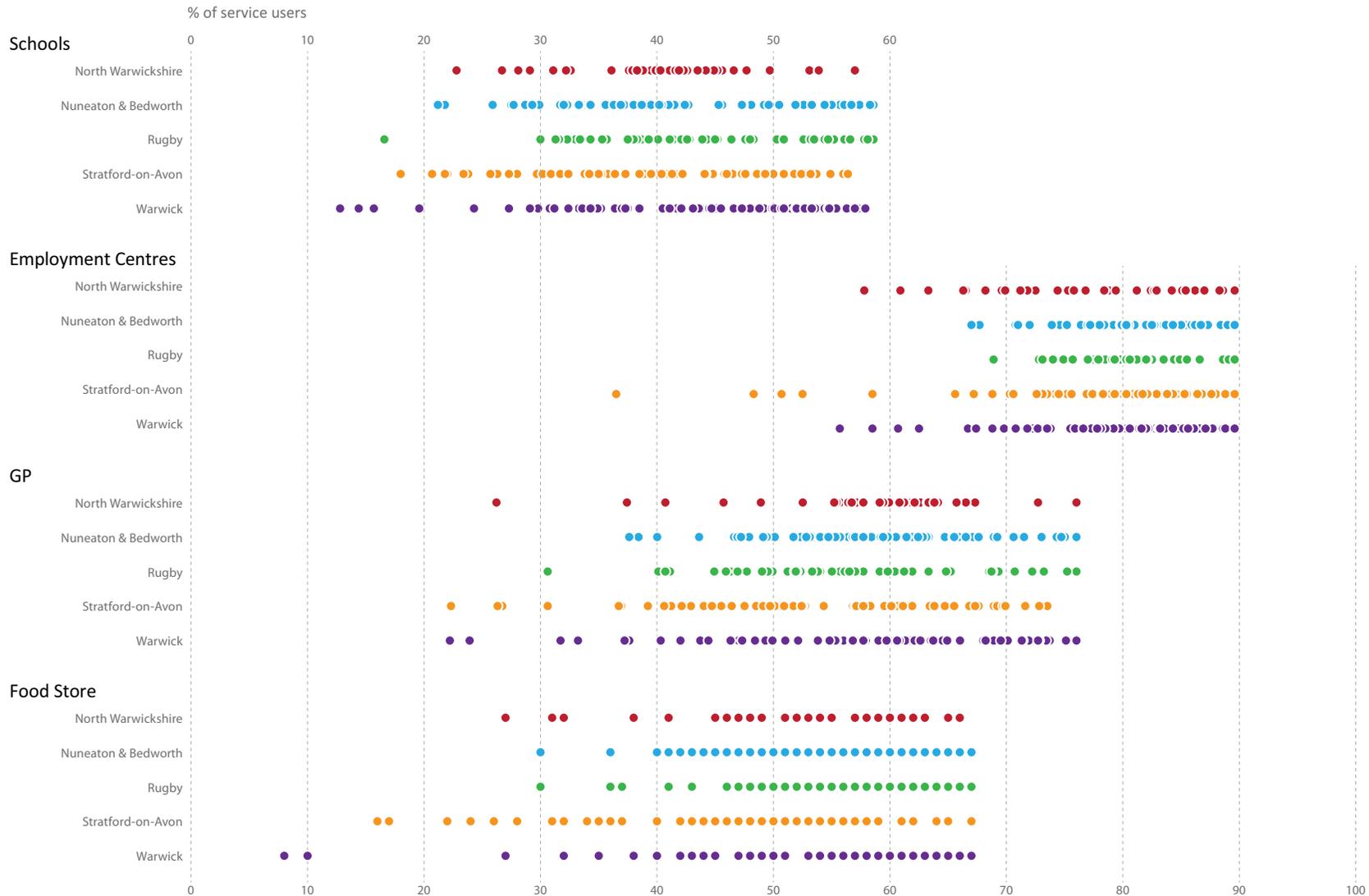


Transport & Environment

Variations in Access to Services at the Local Level

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This graphic presents local data on accessibility to a series of key services in Warwickshire.

Each dot represents a Super Output Area and shows the percentage of service users in that area that can access each service within a reasonable time by public transport or foot (defined within the DfT dataset).

It highlights the variation in accessibility both within and across districts, but also across services. For example, we see that the percentage of service users that can access food stores by foot or public transport within a reasonable time ranges between 8% and 67% among communities in Warwick District but 30% to 67% in Nuneaton & Bedworth.

Source: Department for Transport 2011 <http://bit.ly/1dLM5DG>

Road Traffic Volumes and Congestion

Description

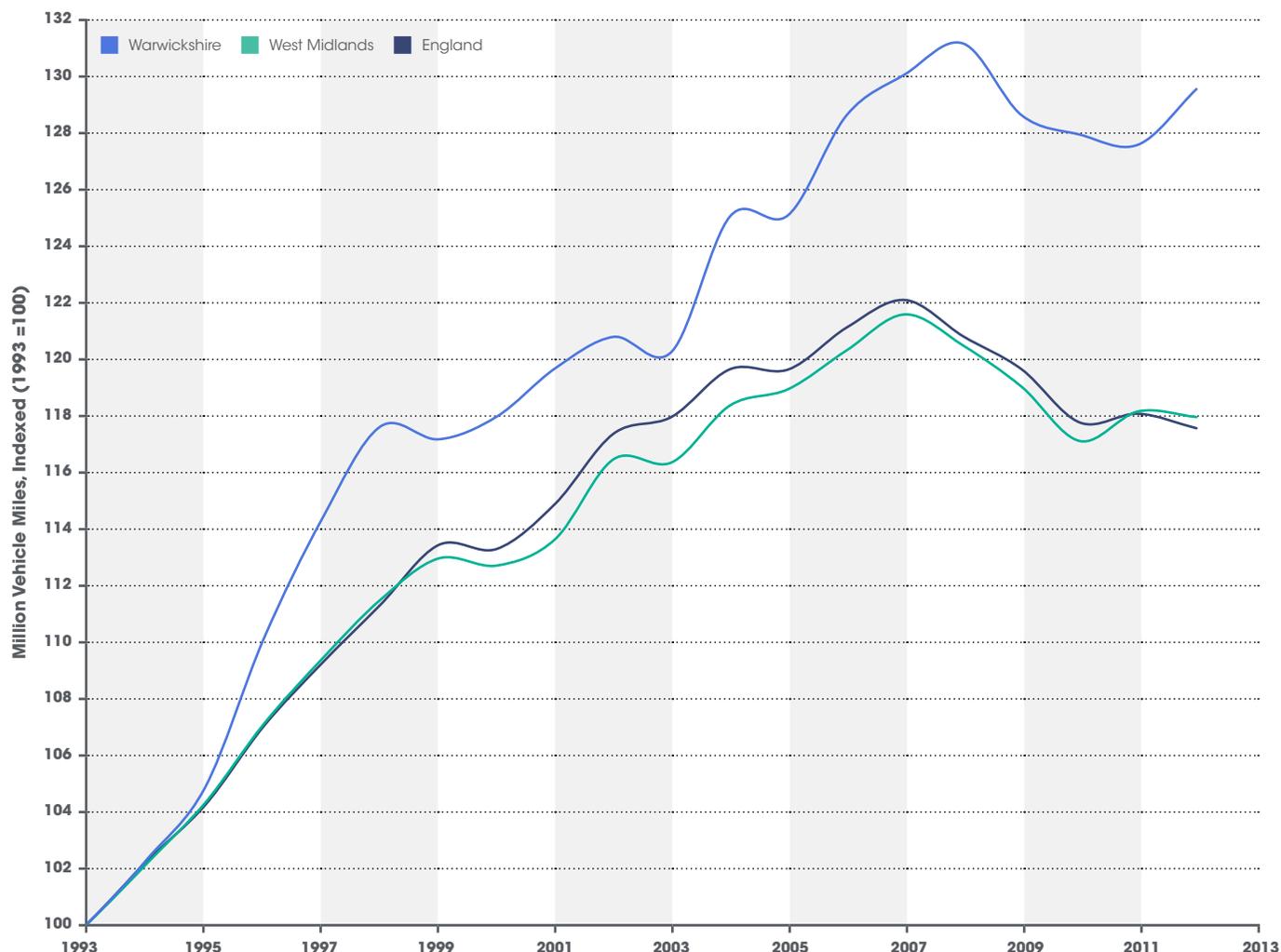
Congestion occurs whenever the number of cars wishing to use a particular road exceeds the capacity of the road, traffic ceases to flow smoothly and queues form. The layout of a road can often cause congestion, as busy junctions or a narrowing of the carriageway can cause traffic to build-up. Furthermore, the problem may be exacerbated by external events such as road works, accidents and poor weather. Higher levels of traffic are an indicator of economic growth and individual prosperity. However, there are also undesirable consequences of congestion from poor air quality to time wasted in traffic jams.

This indicator focuses on two datasets. Firstly, the estimated traffic volumes within the county. These are national statistics provided by the Department for Transport (DfT), allowing comparisons between Warwickshire the rest of the United Kingdom. Secondly, Warwickshire County Council's Transport & Highways team monitors local congestion through average traffic speed in each of the largest towns in the county.

Performance

The level of traffic on Warwickshire's roads has begun to increase for the first time since 2008. From 2011 to 2012, the total number of vehicle miles increased by 2%. This trend appears to coincide with the economic downturn, and the recent increase may be a sign of recovery in the county.

Figure 8.1: Estimated Traffic Flows for all Motor Vehicles in Warwickshire, 1993-2012



Source: Department for Transport (DfT)

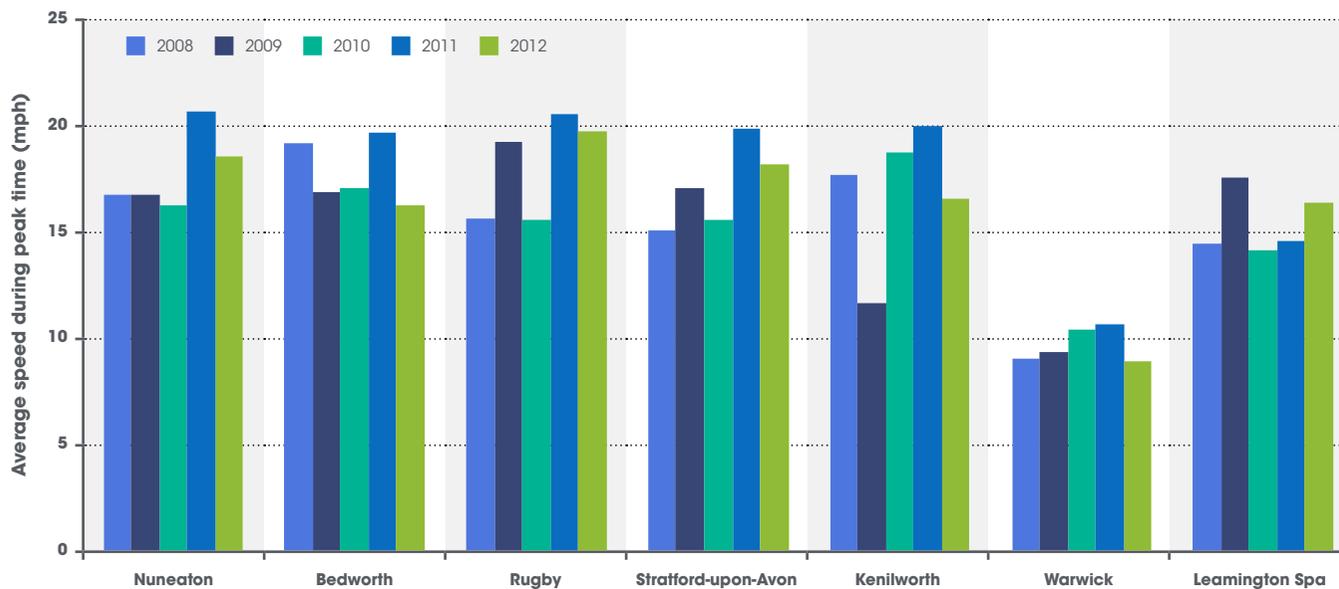
Road Traffic Volumes and Congestion

Road traffic in Warwickshire has increased at a greater rate compared to the equivalent increases seen in the West Midlands or England. Since 2007, there has been a sharp decrease in traffic levels at a national and regional level. Meanwhile in Warwickshire, the decline was much more gradual. The increase in 2012 means traffic levels have almost returned to their 2007 peak.

Data for average traffic speeds in Warwickshire's towns is based upon satellite navigation monitoring data supplied by the Department for Transport (DfT). A number of routes in each town are used and the data covers the period 8.00 a.m. - 9.00 a.m., Monday to Friday during term time, excluding heavy goods vehicles.

Average speeds have fallen since 2011 in all towns measured across the county. The increase in traffic as seen in Figure 8.1 is likely to be the cause of this increase in congestion. Roads in Warwick town centre continue to have the slowest recorded speeds, whereas the highest speeds are found in Rugby town. It should be noted that the layout of the road network within each town has a bearing on the results, as those towns with fewer junctions and 'pinch points' can expect to have more free flowing traffic. Similarly, the number of cars passing through the town centre will be lower if adequate relief roads are available.

Figure 8.2: Average traffic speed during the morning peak for Warwickshire's main towns, 2008-2012



Source: Warwickshire County Council (WCC) Transport & Highways Department

Road Traffic Volumes and Congestion

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Outlook

The potential impacts of congestion have been addressed in the Warwickshire Local Transport Plan (LTP). The third LTP came into effect from April 2011 and covers the period 2011-2026. It has been developed through extensive consultation with both stakeholders and local people.

Warwickshire County Council has secured Government funding worth £7.6 million for crucial junction improvements. The majority of this money will be used to improve the M40 Junction 12 at Gaydon. In addition, the authority has secured £1 million Pinch Point funding for the Europa Way roundabout near Leamington to improve traffic flows. These schemes are expected to help to reduce congestion in South Warwickshire, where congestion is highest, and lead to improvements in journey times.

Further Information

- Further information on congestion can be found in the Local Transport Plan 2011-2026: www.warwickshire.gov.uk/ltp3.
- An interactive map showing estimated traffic flows on motorways and A roads can be downloaded from the Department for Transport website: <http://www.dft.gov.uk/traffic-counts/index.php>

Road Casualties

Description

Locally, road safety is a concern for residents of Warwickshire and it emerges regularly as a priority within many of the Community Forums across the county. It also falls under the ambition of 'Safety and Protection' in **Warwickshire County Council's Corporate Business Plan 2012-13**.

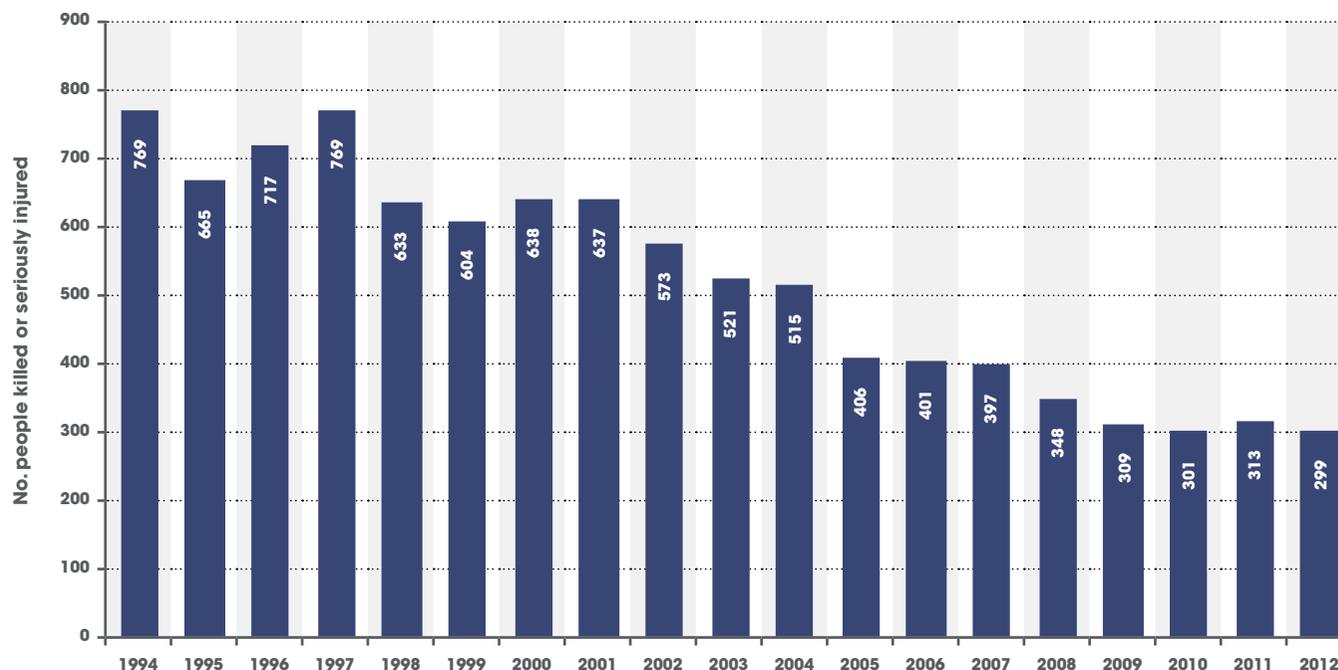
Improving road safety, which locally is defined as reducing the number of people killed and injured on Warwickshire's roads, is a key element in protecting the community and making Warwickshire a safer place to live.

Performance

Warwickshire's road casualty statistics are compiled in accordance with the Department for Transport (DfT) definitions. They represent the number of people killed or injured on public highways (including footways) in collisions which become known to the police within thirty days. There is evidence that an appreciable proportion of non-fatal injury collisions are not reported and are thus not included in the figures.

The DfT classifies the severity of casualties as fatal, serious or slight. The most common figure used for comparison purposes is the number of people killed or seriously injured, usually abbreviated to 'KSI'. Their 2011 annual report on Reported Road Casualties in Great Britain highlights 'driver error or reaction' as the key cause of collisions, with 'failed to look properly' the most frequently reported contributing factor in all collisions, and 'loss of control' the most common contributing factor in fatal collisions. Other key factors were 'exceeding the speed limit' or 'travelling too fast for the conditions', and in the case of pedestrian casualties, 'failure to look properly' was the most frequently reported contributing factor. 'Drink driving' remains an issue, with the Government

Figure 8.3: People reported killed or seriously injured on Warwickshire roads, 1994 – 2012



Source: Warwickshire County Council, Road Safety Unit, 2013

estimating 5% of total casualties and 15% of road fatalities occurred when someone was driving over the legal alcohol limit.

Aside from the devastating effects that road traffic collisions can have on the direct victims, there are wider impacts on the community. The DfT estimates that each fatality prevented saves £1.7m, each serious injury £190,000 and each slight injury £15,000.

Warwickshire has a significant motorway and trunk road network which carries high traffic volumes through the county. This affects road casualty levels, resulting in a high casualty rate when compared to Warwickshire's population.

However, when casualty rates are compared in terms of KSI per billion vehicle miles (a key indicator used by DfT to compare local authority areas), Warwickshire's casualty rate is better than average.

In Warwickshire, the overall rate of reduction in the number of people reported killed or seriously injured during the last 18 years is better than the national average. In 2012, 299 people were reported killed or seriously injured on Warwickshire roads, compared to 769 people in 1994. The 2012 figure also represents a 4% reduction compared to the previous twelve months.

A summary of casualties in recent years is provided in Figure 8.4.

Figure 8.4: Summary of all reported casualties in Warwickshire

| | | 2000 | 2011 | 2012 |
|-------------------------------|-----------------------------|-------|-------|------|
| All reported casualties | Killed | 64 | 33 | 28 |
| | Killed or seriously injured | 639 | 313 | 299 |
| | All casualties | 3,241 | 2,078 | 2057 |
| All reported child casualties | Killed | 2 | 1 | 0 |
| | Killed or seriously injured | 48 | 17 | 21 |
| | All casualties | 321 | 144 | 123 |

Source: 2001 Census & 2011 Census (Table CT0015EW), Office for National Statistics

The risk of becoming a casualty varies widely by age and road user type. High risk road user groups include motorcyclists who constitute about 1% of traffic but in 2012 accounted for 25% of killed or seriously injured casualties in Warwickshire, and young drivers, riders and passengers (aged 17-24 years) who accounted for 28% of all people killed or seriously injured. Pedestrian casualties (14% of people killed or seriously injured in 2012) peak at age 10-14 years and cycle casualties (8% of people killed or seriously injured in 2012) at age 11-16 years.

Pedestrian casualties are higher in urban areas and driver KSI casualties are higher in rural areas, a trend reflected in differences between Warwickshire's districts. Stratford-on-Avon District consistently has the highest number of people killed or seriously injured on its roads, followed by North Warwickshire Borough, reflecting the more rural nature of these two districts.

In 2012, rural roads (speed limit is greater than 40mph) accounted for 147 people killed or seriously injured in Warwickshire, representing 49.2% of all KSIs in the county. Urban roads (speed limit is between 20mph and 40mph) accounted for 121 people killed or seriously injured, representing 40.5% of all KSIs in the county. The remaining people killed or seriously injured in Warwickshire were the result of incidents on motorways (10.4%).

Outlook

Nationally, the DfT have produced a Strategic Framework for Road Safety which is split between national measures and areas where policy and delivery will reflect local priorities, circumstances and economic assessment. The framework ensures continued need for national Government in providing leadership on road safety.

The outlook for road safety is uncertain. Figures for individual years can vary significantly and the trend over a longer period is a more reliable indicator. Locally in Warwickshire, the County Council, Police and other organisations work together to reduce road casualties through the Warwickshire Road Safety Partnership. The future of road safety is very much a partnership orientated approach with a focus into the future on enforcement, education and engineering. The Partnership aims to deliver an effective multi-agency approach with both road users and communities. Currently, the Partnership has set the target of reducing the number of people either killed or seriously injured on Warwickshire roads to 277 by 2015. This is based on a target suggested by the Government in 2009 to be achieved by 2020. Warwickshire chose to halve the time period for achieving this.

Further Information

- Warwickshire County Council publishes 'Reported Road Casualties in Warwickshire' annually on its website www.warwickshire.gov.uk/roadcasualties.
- Reported Road Casualties in Great Britain: 2011 Annual Report (DfT): <http://bit.ly/18jtq1F>
- Strategic Framework for Road Safety - Department for Transport 2011: <http://bit.ly/MwMonx>

Background

An individual's use of public transport is dependent on a number of factors such as proximity to the network, ability to own, access or drive a vehicle and the cost of running a vehicle. The benefits of using either public transport or a car are dependent on factors such as the reliability of the road network. Public transport can affect resident's quality of life by allowing them to access a wider range of services and facilities. While car ownership offers a greater degree of flexibility when making journeys, public transport is widely used amongst those who do not own a car.

The 'car ownership and travel to work' indicator considers car usage as well as the primary method by which residents travel to work. This section attempts to go further by examining all public transport usage rather than journeys solely associated with work. It is not possible to gather data on all methods of transport covered in the travel to work indicator; therefore this indicator looks at the most popular methods of public transport which are walking, cycling, trains and buses.

Performance

Walking or Cycling

Walking and cycling are two of the easiest methods of transport to use. They are also leisure activities and either one has associated health benefits if done regularly. The data from the Active People Survey conducted by Sport England records the proportion of residents walking or cycling each month in 2011/12. In this survey walking was defined as a continuous walk of at least thirty minutes anytime in the last month. Cycling refers to any cycling regardless of distance or purpose. The government recommends at least 150 minutes (two hours and 30 minutes) of moderate-intensity aerobic activity such as cycling or fast walking every week for adults with higher levels for older children.

Figure 8.5: Percentage of residents walking or cycling, 2011-2012

| | WALK | CYCLE | WALK OR CYCLE |
|---------------------|-----------|-----------|---------------|
| LOCAL AUTHORITY | % | % | % |
| North Warwickshire | 67 | 9 | 71 |
| Nuneaton & Bedworth | 64 | 8 | 65 |
| Rugby | 68 | 12 | 70 |
| Stratford-on-Avon | 70 | 10 | 72 |
| Warwick | 76 | 13 | 77 |
| Warwickshire | 70 | 11 | 71 |

Notes: Results are grouped according to the area where respondents live, which may not be the same as the area where they walk or cycle. Results based on a 95% confidence interval, survey based on 500 responses per district
Source: Department for Transport (DfT) / Active People Survey (Sport England)

In 2011/12, seven in ten Warwickshire residents said they had walked last month. Meanwhile only around one in ten recorded that they had cycled. According to the survey, around a third of the population do not use walking or cycling as a mode of transport regularly. While some residents may take part in sport or other exercise, rather than walking or cycling, a number of residents questioned are likely to be exercising less than the recommended amount.

Rail

In the financial year 2011/12, over 7.2 million rail journeys either started or ended at a Warwickshire station. Furthermore almost 600,000 passengers used a Warwickshire station to interchange from one train to another as part of their journey. Since 2010/11, the total number of journeys has increased by 700,000 (or 11%) across Warwickshire. Apart from Danzey station in Stratford-on-Avon District, all stations in Warwickshire had a greater number of passengers in 2011/12 than in the previous year.

However, a significant part of this is due to improved estimation in certain areas. Therefore, it is likely that previous years are underestimations due to less accurate methods used in the past. The remainder of the increase is caused by the continued growth of Leamington Spa and Rugby stations which account for over half (50%) of the passenger numbers in the county. Furthermore, the six largest stations account for 92% of passengers. Figure 8.6 considers the numbers of passengers at Warwickshire train stations in 2010/11 and 2011/12.



Figure 8.6: Number of passengers per station, 2010-11 and 2011-12

| STATION NAME | DISTRICT | 2010/11 | 2011/12 | % INCREASE |
|------------------------------|---------------------|------------------|------------------|--------------|
| Atherstone | North Warwickshire | 65,340 | 77,558 | 18.7% |
| Coleshill Parkway | North Warwickshire | 151,792 | 170,320 | 12.2% |
| Polesworth | North Warwickshire | 690 | 1,376 | 99.4% |
| Water Orton | North Warwickshire | 42,584 | 44,266 | 4.0% |
| Bedworth | Nuneaton & Bedworth | 53,116 | 61,130 | 15.1% |
| Nuneaton | Nuneaton & Bedworth | 969,254 | 996,516 | 2.8% |
| Rugby | Rugby | 1,564,834 | 1,750,748 | 11.9% |
| Bearley | Stratford-on-Avon | 944 | 960 | 1.7% |
| Claverdon | Stratford-on-Avon | 2,294 | 2,570 | 12.0% |
| Danzey | Stratford-on-Avon | 6,988 | 6,910 | -1.1% |
| Henley-In-Arden | Stratford-on-Avon | 94,506 | 108,952 | 15.3% |
| Stratford-Upon-Avon | Stratford-on-Avon | 631,196 | 855,818 | 35.6% |
| The Lakes | Stratford-on-Avon | 11,832 | 12,390 | 4.7% |
| Wilmcote | Stratford-on-Avon | 16,932 | 20,984 | 23.9% |
| Wood End | Stratford-on-Avon | 11,460 | 12,696 | 10.8% |
| Wootton Wawen | Stratford-on-Avon | 10,814 | 11,834 | 9.4% |
| Hatton | Warwick | 38,000 | 43,936 | 15.6% |
| Lapworth | Warwick | 33,796 | 35,976 | 6.5% |
| Leamington Spa | Warwick | 1,856,378 | 2,009,402 | 8.2% |
| Warwick | Warwick | 503,196 | 526,366 | 4.6% |
| Warwick Parkway | Warwick | 453,868 | 485,626 | 7.0% |
| Warwickshire Stations | Warwickshire | 6,519,814 | 7,236,334 | 11.0% |

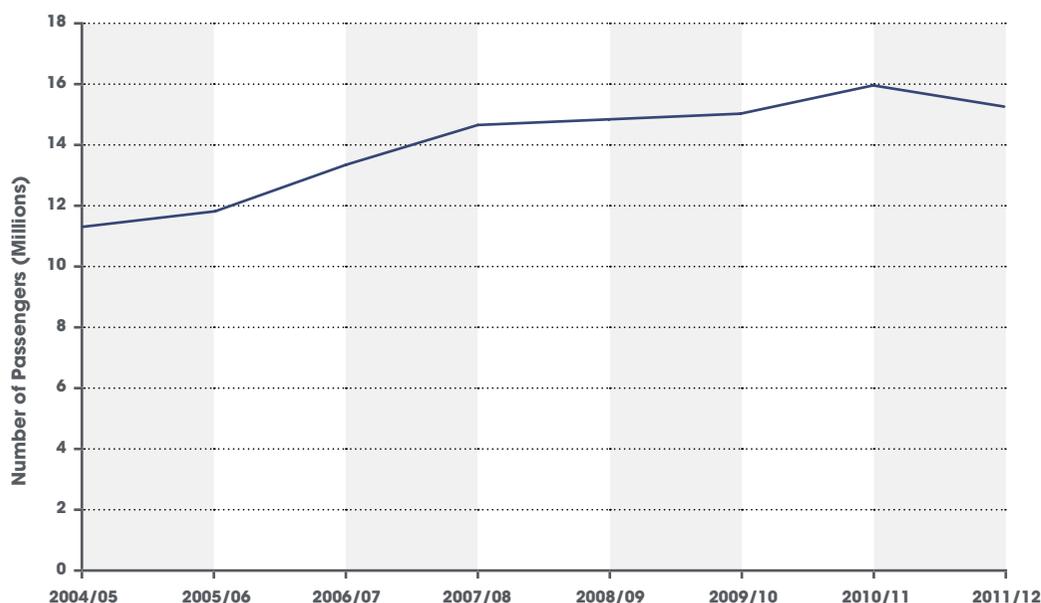
Source: Office of Rail Regulation (ORR)/Steer Davies Gleave

The geographic shape of the county causes a split in rail routes within Warwickshire. At present, there are no direct trains between the northern and southern parts of the county and these journeys require a change in either Coventry or Birmingham.

Buses

In the financial year 2011/12, the total number of bus passengers fell by 700,000 from 2010/11 to 15.2 million passengers. However, bus usage remains higher than in any of the other recorded years prior to 2010/11. The reasons behind this reduction are hard to identify, particularly as only countywide data is available. In recent years, subsidies for some routes have been reduced. This has led to a fall in the number of services in some areas, which may be partly responsible for the reduction in passengers.

Figure 8.7: Number of bus passengers in Warwickshire



Source: Department for Transport (DfT)/ Warwickshire County Council

Within Warwickshire, the total number of passengers has increased since free bus passes were introduced in 2005. Since then, usage has remained around fifteen million journeys for the past five years.

Outlook

The outlook for public transport is largely mixed, as the effects of the recession on public transport usage can be both positive and negative. Increases in the cost of running a car such as insurance and fuel, may mean households can no longer afford to own a vehicle, and therefore may rely more on public transport. Conversely, public transport usage may fall if people no longer need to travel to work due to unemployment.

Bus services continue to face cuts to subsidies and this is likely to lead to further reductions in usage. The rail network in Warwickshire is growing with increasing passenger numbers and a new station at Stratford Parkway. Part of the 'NUCKLE' project aims to build new stations at Kenilworth and Nuneaton Bermuda Park.

In the long term, it remains unclear what impact High Speed Two (HS2) may have for residents of the county but it is likely to affect a number of different areas in Warwickshire.

Further Information

- Further information about public transport can be found by visiting www.warwickshire.gov.uk/travel
- More details on the "NUCKLE" project are online at <http://www.warwickshire.gov.uk/nuckle>
- Alternatively, contact the Observatory for more information on 01926 418066 or email research@warwickshire.gov.uk.

Car Ownership & Method of Travel to Work

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Background

The method by which residents travel to work can have an impact on their quality of life. Car ownership may give residents greater freedom and is often a quicker, more flexible method of travel than using public transport. In addition, employers may be in locations that are only accessible by car, therefore car ownership may also increase the number of jobs opportunities available to Warwickshire residents.

As household earnings rise, a car becomes more affordable and as a result, the number of households with a car increases. Car ownership may also tell us how accessible an area is, people may be less likely to have a car if services are available locally by walking or using public transport. However, higher levels of car ownership can lead to a number of problems for residents including; increased congestion and higher levels of pollution.

Data on car ownership and method of travel to work is recorded every ten years as part of the Census. This indicator refers to 2011 Census data released in 2013.

Performance

Car Ownership

According to the latest 2011 Census data, Warwickshire has 1.38 cars or vans per household. This is an increase of 15.7% since 2001 or the equivalent of an additional 43,362 cars in the county over the last ten years.

Over three in ten (31%) Warwickshire households had two cars or vans at the time of the 2011 Census. This is much higher than the national equivalent, where only a quarter of households own two cars. A further 10% of households own three or more cars or vans, which is again above the national average (7%). Despite this increase, the number of households without a car has remained relatively flat. Around 18% of households in Warwickshire do not own a car in 2011, compared to 19% who were without a car in 2001.

At a district level, a rural urban split seems to emerge in terms of car ownership. Nuneaton & Bedworth Borough has fewer car owning homes than the Warwickshire average whereas Stratford-on-Avon District has a far greater number of households with access to a car. This pattern continues when examining higher numbers of cars.

Figure 8.8: Number of cars or vans owned by households, 2011

| LOCAL AUTHORITY | NUMBER OF CARS/VANS | | | | | CARS PER HOUSEHOLD |
|---------------------|---------------------|--------------|--------------|-------------|-------------|--------------------|
| | 0 | 1 | 2 | 3 | 4 | |
| North Warwickshire | 15.5% | 40.1% | 32.6% | 8.4% | 3.4% | 1.45 |
| Nuneaton & Bedworth | 22.4% | 42.6% | 27.0% | 6.1% | 1.9% | 1.23 |
| Rugby | 17.5% | 42.5% | 30.9% | 6.8% | 2.3% | 1.35 |
| Stratford-on-Avon | 12.8% | 38.2% | 35.3% | 9.6% | 4.2% | 1.56 |
| Warwick | 18.5% | 41.1% | 31.4% | 6.7% | 2.4% | 1.35 |
| Warwickshire | 17.6% | 40.9% | 31.3% | 7.4% | 2.8% | 1.38 |
| England | 25.8% | 42.2% | 24.7% | 5.5% | 1.9% | 1.16 |

Source: 2011 Census (Table KS404EW), Office for National Statistics

At Lower Super Output Area (LSOA) level the situation is even more varied. In a handful of areas over half (50%) of households are without a car compared to approximately 20 LSOA's which show car ownership above 95%. The highest levels of car ownership are in purpose built estates on the edge of towns. These estates including Chase Meadow and Warwick Gates in Warwick District which were built with ample parking and close links to major roads and motorways. Meanwhile the areas with the lowest car ownership tend to be much closer to town centres and there is some relationship between these areas and higher relative levels of deprivation. Figure 8.9 shows the LSOAs with the highest and lowest proportions of car ownership at the time of the 2011 Census.

Car Ownership & Method of Travel to Work



Figure 8.9: Percentage of households who own a car by Lower Super Output Area (LSOA)

| HIGHEST PROPORTION OF CAR OWNERS | | | LOWEST PROPORTION OF CAR OWNERS | | |
|---|---------------------|-------------|---------------------------------|---------------------|-------------|
| LSOA | DISTRICT | % OWN A CAR | LSOA | DISTRICT | % OWN A CAR |
| Chase Meadow | Warwick | 97.6% | Riversley | Nuneaton & Bedworth | 55.8% |
| Warwick Gates | Warwick | 97.5% | Lillington East | Warwick | 54.6% |
| Whitestone North | Nuneaton & Bedworth | 97.1% | Abbey Town Centre | Nuneaton & Bedworth | 50.2% |
| Bubbenhall, Wappenbury, Weston & Eathorpe | Warwick | 96.8% | Rugby Town Centre | Rugby | 49.2% |
| Galley Common South | Nuneaton & Bedworth | 96.4% | Bar Pool North & Crescents | Nuneaton & Bedworth | 47.2% |

Source: 2011 Census (Table KS404EW), Office for National Statistics

Unsurprisingly, higher levels of car ownership lead to an increase in the number of people driving to work. In Warwickshire, one in two residents travels to work by car or van, either driving or as a passenger. There is a strong negative relationship between high car ownership and the number of households where no one works. The number of households owning a car appears to increase as the unemployment rate falls.

Method of Travel to Work

The 2011 travel to work data has been released in two different ways due to changes in the questions asked between the 2001 and 2011 Census. In 2001, people who recorded their place of work as working mainly at or from home were considered to have their mode of travel to work as working mainly at or from home. In 2011, people working mainly at or from home could record, for example, that they travelled to work as a driver in a car or van, despite being based at home. As such, where reference is made to the 2011 Census in isolation, figures from table QS701EW are quoted. Where comparisons are made to the 2001 Census, table CT0015EW is used as this is directly comparable with the 2001 Census question.

Figure 8.10: Method of Travel to Work in Warwickshire, 2001 - 2011

| | 2001 | 2011 | PERCENTAGE POINT CHANGE |
|--------------------------------|-------|-------|-------------------------|
| Driving car / van | 43.5% | 43.6% | 0.2% |
| Not in employment | 32.4% | 32.2% | -0.2% |
| Walk | 6.6% | 6.2% | -0.4% |
| Work from Home | 6.6% | 8.1% | 1.6% |
| Passenger in a car or van | 4.7% | 3.8% | -0.9% |
| Bus or coach | 2.3% | 2.0% | -0.3% |
| Cycle | 2.0% | 1.6% | -0.4% |
| Train | 0.9% | 1.4% | 0.6% |
| Other method of travel to work | 1.2% | 0.9% | -0.3% |

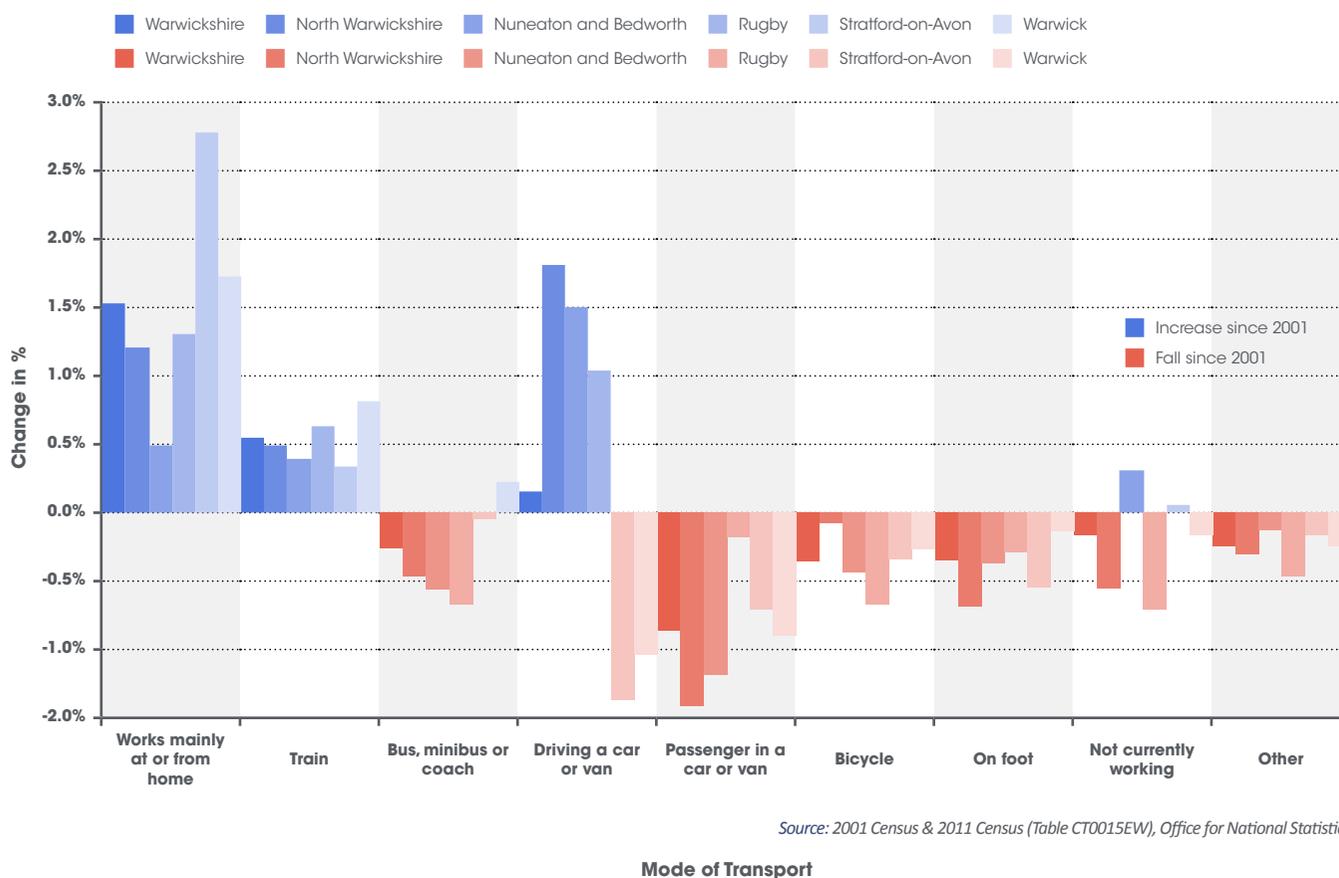
Source: 2001 Census & 2011 Census (Table CT0015EW), Office for National Statistics

Notes: Figures based on all residents aged 16-74 rather than the working population. Percentages may not sum due to rounding. Red areas denote falls in method of travel to work between 2001 and 2011, green denotes increases in mode of travel to work

Car Ownership & Method of Travel to Work

The largest percentage change has been in train travel from 2001 to 2011 with over 50% more residents choosing to use this method than in 2001. Home working has also substantially increased, with 8.1% of the population working from home in 2011 and is now the second most popular method of working behind driving a car or van. Driving a car or van remains the most common method used with 43.6% of residents aged 16-74 years using this method of transport. Figure 8.11 shows the breakdown by district with positive changes between 2001 and 2011 in blue and reductions in red.

Figure 8.11: Change in Travel to Work Patterns, 2001 – 2011



Source: 2001 Census & 2011 Census (Table CT0015EW), Office for National Statistics

Despite large falls across the county, the number of residents travelling to work by bus or coach has increased in Warwick District between 2001 and 2011; similarly, car usage for travel to work has fallen in Stratford-on-Avon and Warwick Districts, despite Warwickshire showing a modest increase. Home working, while increasing across all of Warwickshire, has seen a much stronger uptake in Stratford-on-Avon and Warwick Districts, which might be responsible for the falls in car travel in these areas.

CLICK ON THE INTERACTIVE MAP
to view car ownership or travel to work data in Warwickshire in more detail

Car Ownership & Method of Travel to Work

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Outlook

The average commute time for Warwickshire residents has increased in recent years. According to the Labour Force Survey, the average commute in Warwickshire increased from 21 minutes in Q4 2011 to 24 minutes in Q4 2012. This is similar to the national average and mirrors the national trend. This increase could reflect the current employment market and the unaffordable nature of housing for many residents or for others that they simply choose to travel further to work as demonstrated by the increase in train travel.

The substantial increase in the number of people who are working mainly from home is evident from the 2011 Census and reflects a changing pattern of working. However, there are rising numbers of cars in Warwickshire, along with more cars per household; which may place additional pressures on communities and local infrastructure. The Local Transport Plan runs to 2026 and seeks to set out Warwickshire County Council's intentions in this area. The increase in the numbers of cars combined with the slight decline in walking and cycling rates across the county, suggests that wider environmental and health concerns, particularly relating to physical activity levels, are likely to continue to be present.

Further Information

- More information on where people are travelling to work ('flow data') will be released by ONS at a later date and this should provide further insight into commuting patterns in the county. At the time of publication, the scheduled release date of 2011 Census flow data is February 2014.
- The Labour Force Survey Data on Average Travel to work times can be found at: <http://bit.ly/15GLIXx>
- For more information on 2011 Census, please contact the team on 01926 418066 or email research@warwickshire.gov.uk

Access to Key Services



Description

Timely access to key services can have a significant impact on residents. This indicator considers two different sources to summarise access to key services: the distance in terms of journey time to services and the quality of the internet connection. The 2011 transport accessibility statistics from the Department for Transport (DfT) measure the average journey times for eight different key services (GPs, hospitals, primary schools, secondary schools, further education establishments, supermarkets, town centres and employment centres). This information is then split by method of travel including car, public transport and walking.

The second part of this indicator focuses on access to broadband and the number of residents with adequate download speeds. While any house with a phone line should be able to access dial-up internet or mobile broadband, which covers around 97% of the UK, the slow speeds are often ill equipped to handle the variety of tasks for which the internet can now be used. Slow speeds and unreliable connections can affect economic development in rural areas.

Performance

Distance to Key Services

In 2011, the average journey time by car was less than ten minutes for each of the eight key services in Warwickshire. For five of the services, the average journey time was around five minutes (primary schools, secondary schools, GPs, employment centres, further education colleges and supermarkets). The remaining two services (town centres and hospitals) have slightly longer car journey times of approximately seven minutes and nine minutes respectively.

At a district level, there is greater variation in journey times. While residents of Nuneaton & Bedworth Borough and Warwick District are relatively close to their town centres, the rest of the county face a journey of around between seven and nine minutes. Interestingly, a considerable number of Warwickshire residents are nearer to a supermarket than their local town centre. The longest average journey time was for travelling to a hospital. This is perhaps unsurprising as there are a set number of hospitals in the county however, residents often need to get to a hospital quickly and longer journey times may have an impact on patients.

Figure 8.12: Average Journey time by car, in minutes

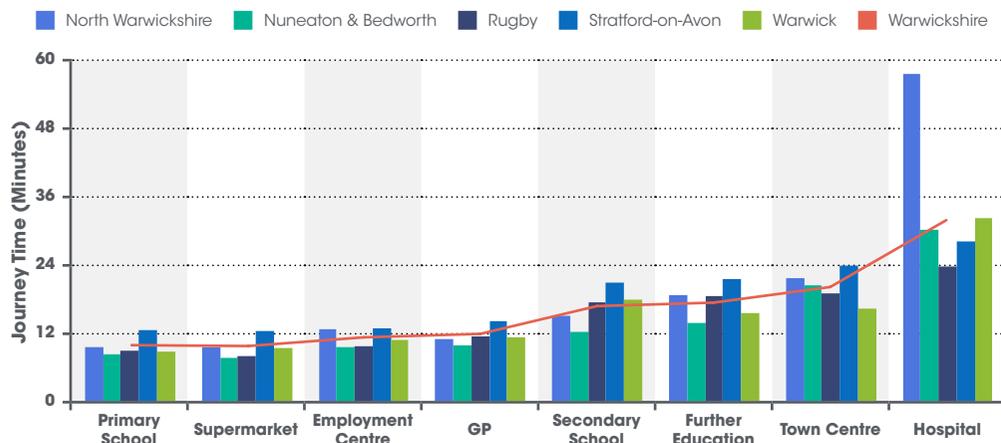
| | PRIMARY SCHOOL | SUPERMARKET | EMPLOYMENT CENTRE | GP | SECONDARY SCHOOL | FURTHER EDUCATION | TOWN CENTRE | HOSPITAL |
|---------------------|----------------|-------------|-------------------|-----|------------------|-------------------|-------------|----------|
| North Warwickshire | 5.0 | 5.0 | 5.1 | 5.0 | 5.3 | 6.1 | 7.3 | 12.1 |
| Nuneaton & Bedworth | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.1 | 5.5 | 8.7 |
| Rugby | 5.0 | 5.0 | 5.0 | 5.1 | 5.3 | 6.0 | 7.2 | 6.4 |
| Stratford-on-Avon | 5.0 | 5.1 | 5.2 | 5.2 | 6.0 | 7.0 | 8.8 | 9.9 |
| Warwick | 5.0 | 5.0 | 5.0 | 5.0 | 5.2 | 5.3 | 5.5 | 7.6 |
| Warwickshire | 5.0 | 5.0 | 5.1 | 5.1 | 5.4 | 5.8 | 6.7 | 8.7 |

Source: Department for Transport (DfT) Transport Accessibility Statistics 2011

The journey times by public transport and/or walking in Warwickshire are much higher than the equivalent journey times by car and the differences between areas are greater. The most common four services have travel times of approximately ten minutes (primary schools, GPs, employment centres and supermarkets). Secondary schools and further education colleges have much longer journey times by public transport and/or walking, with an average of over 15 minutes in each district apart from Nuneaton & Bedworth Borough. School buses often take indirect routes that serve as many pupils as possible but this has an impact on the journey time.

Access to Key Services

Figure 8.13: Average journey time by public transport, 2011



Source: Department for Work and Pensions (DWP)

As with car travel, town centres and hospitals have the longest journey times by public transport. Without a car, the average travel time to a town centre for residents in Stratford-on-Avon District is over twenty-five minutes. All five districts in Warwickshire have an average travel time to hospital of more than twenty-five minutes. North Warwickshire Borough and Stratford-on-Avon District do not have a hospital, requiring residents to travel to another district or outside the county.

While examining the district averages is useful, it masks considerable variation at a local level. Figure 8.14 shows the number of Lower Super Output Areas (LSOAs) with an average journey time by public transport of less than fifteen minutes, less than thirty minutes, less than sixty minutes and over an hour.

Figure 8.14: Number of LSOAs by Public Transport Average Journey Time

| TRAVEL TIME | GP | HOSPITAL | SUPERMARKET | PRIMARY SCHOOL | SECONDARY SCHOOL | FURTHER EDUCATION | TOWN CENTRE | EMPLOYMENT CENTRE |
|----------------------|-----|----------|-------------|----------------|------------------|-------------------|-------------|-------------------|
| 0 – 14 Minutes | 283 | 48 | 306 | 310 | 206 | 189 | 141 | 277 |
| 15 – 29 Minutes | 41 | 128 | 18 | 17 | 90 | 104 | 136 | 50 |
| 30 – 59 Minutes | 8 | 138 | 8 | 4 | 33 | 36 | 52 | 5 |
| More than 60 Minutes | 1 | 19 | 1 | 2 | 4 | 4 | 4 | 1 |

Source: Department for Transport (DfT) Transport Accessibility Statistics 2011
Notes: Warwickshire contains 333 LSOAs

With the exception of hospitals, only a handful of areas are more than an hour from key services by public transport. However, Ladbroke & Priors LSOA, in Fenny Compton ward in Stratford-on-Avon District is more than an hour from each key service, which could cause problems for those residents if they do not have access to a car.

Broadband Services

As part of the Coventry, Solihull and Warwickshire Broadband Project (a consortium of eight local authorities led by Warwickshire County Council), residents were invited to report their broadband speeds via an online survey. This was a self-reporting survey and the majority of publicity was targeted in areas with a perceived problem. Of the 7,944 responses from Warwickshire residents, over two in three (67%) said they had poor broadband speed. The results are useful in identifying areas where broadband is unavailable or the service is poor. Figure 8.15 shows the ten areas with the most responses indicating they had a poor service.

Access to Key Services

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Figure 8.15: Quality of Broadband service, Spring 2011 – Spring 2013

| NO. | LSOA | DISTRICT | EXCELLENT | AVERAGE | POOR | UNAVAILABLE | GRAND TOTAL | % POOR |
|-----|---|-----------|-----------|---------|------|-------------|-------------|--------|
| 1 | Long Compton | Stratford | 1 | 91 | 198 | 2 | 292 | 68% |
| 2 | Burton Dassett | Stratford | 1 | 28 | 149 | 8 | 186 | 80% |
| 3 | Bishops Itchington | Stratford | | 14 | 138 | 1 | 153 | 90% |
| 4 | Leam Valley | Rugby | 1 | 16 | 121 | 10 | 148 | 82% |
| 5 | Bubbenhall, Wappenbury, Weston & Eathorpe | Warwick | | 14 | 116 | 2 | 132 | 88% |
| 6 | Claverdon | Stratford | 2 | 57 | 115 | | 174 | 66% |
| 7 | Fenny Compton, Farnborough & Avon Dassett | Stratford | 6 | 132 | 108 | 6 | 252 | 43% |
| 8 | Cawston South | Rugby | | 31 | 107 | | 138 | 79% |
| 9 | Stoneleigh | Warwick | | 37 | 105 | 4 | 146 | 72% |
| 10 | Welford | Stratford | 2 | 63 | 105 | 1 | 171 | 61% |

Source: Coventry Solihull and Warwickshire Broadband Project

The areas identified with the poorest broadband service are all defined as rural using the rural/urban definition from the Department for Environment, Food and Rural Affairs (DEFRA). Rural areas often suffer from poor broadband speeds due to the distances between cabinets and houses. These distances and fewer households mean these areas are unlikely to be upgraded to fibre broadband without subsidy from Local Government or other public bodies. However, it is worth noting that broadband access can be highly variable and pockets of poor access can exist in any area.

Further Information

- More information about the provision of broadband within the county and the wider CSW project can be found at <http://www.cswbroadband.org.uk/>
- Further information on key service accessibility can be found on the Department for Transport (DfT) website: <http://bit.ly/184yeoO>
- For more detail on the issues explored in this section, particularly with relevance to older residents, please see the following link to the AgeUK website: <http://bit.ly/1dPyI93>

Outlook

The Coventry, Solihull and Warwickshire Broadband project have agreed a £14.6 million deal with BT that will bring superfast broadband (with a speed of more than 24Mbps) to 91% of the sub-region. The remaining 9% will achieve speeds from 2Mbps up to 23.9Mbps. For many in the more rural areas this will make a real difference and it will give greater flexibility in the way that people choose to work or to spend their leisure time. This project is a stepping-stone to the European targets for 2020, which state that all premises should be connected at a minimum of 30 Mbps and 50% of premises at 100 Mbps. This will be a major undertaking given that the current targets are extremely challenging. Additional government funds are proposed in the future to enable this to happen and the aim is to increase the fibre footprint as soon as funding is available.

The outlook for accessing other services is mixed based on the transport accessibility statistics from the Department for Transport (DfT), with average journey times varying significantly across the county and depending on the mode of transport. In some cases, there are alternative ways in which residents can access these services, for example, services such as 111 and its predecessor NHS Direct could be a viable alternative in some cases to visiting a GP. Similarly, as more households gain access to superfast broadband, residents are potentially able to make use of more services without leaving their home.

Household Waste



Description

It is inevitable that waste will be generated by households but choices can be made about the way that it is managed. The *Government Review of Waste Policy in England 2011*, produced by Defra in June 2011, prioritises efforts to manage waste in line with the waste hierarchy and reduce the carbon impact of waste.

The hierarchy gives top priority to waste prevention, followed by preparing for re-use, recycling, other types of recovery (including energy recovery), and last of all disposal (for example landfill).

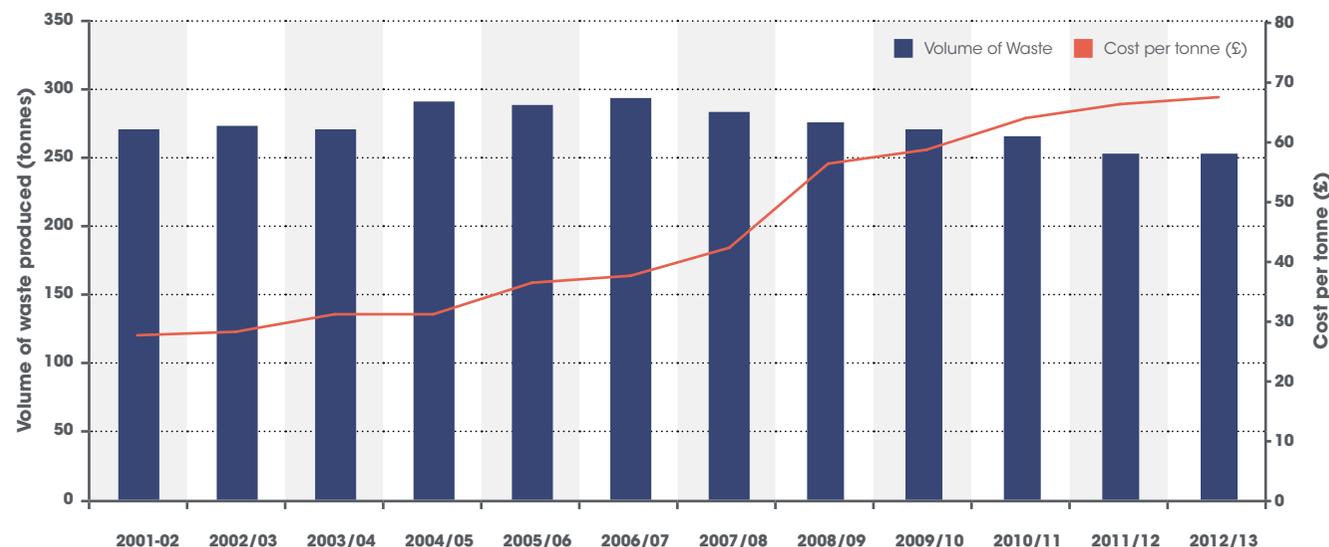
As part of this, it is important to target those waste streams with high carbon impacts, both in terms of embedded carbon (food, metals, plastics, textiles) and direct emissions from landfill (food, paper and card, textiles, wood). There is a new emphasis on the use of life cycle thinking in all waste policy and waste management decisions and the reporting of waste management in carbon terms, as an alternative to weight-based measures.

Performance

The cost of waste disposal (per tonne) is continuing to rise. Landfill tax is now £72 per tonne and will increase by £8 per tonne per year until at least 2014/15. This is placing increasing emphasis on the need to reduce the amount of waste sent for disposal. Total waste in Warwickshire increased by 0.5% between 2011/12 and 2012/13, primarily because of additional green waste produced over the year.

Warwickshire Waste Partnership produced a new Business Plan in March 2011 which sets new targets for the Partnership. These targets will help ensure that Warwickshire's waste is managed in an environmentally, economically and socially sustainable way.

Figure 8.16: Waste produced and cost of disposal in Warwickshire, 2001-02 – 2012-13



Source: Warwickshire County Council, Waste Management 2013

The amount of waste produced per head of population fell again in 2012/13, and has done so for each of the last eight years. This could well be linked to the economic climate as people are becoming more mindful about what they are discarding as well as the national and local Love Food, Hate Waste campaign supported by the Waste Resources Action Programme, designed to encourage householders to reduce the amount food they discard.

Figure 8.17 shows a continued rise in waste recycled, and for the first time, over 50% of waste is now recycled or composted. Over the last seven years, the proportion of waste that is sent to landfill has halved, from 65.2% in 2005/06, to just 31.9% in 2012/13.

Household Waste



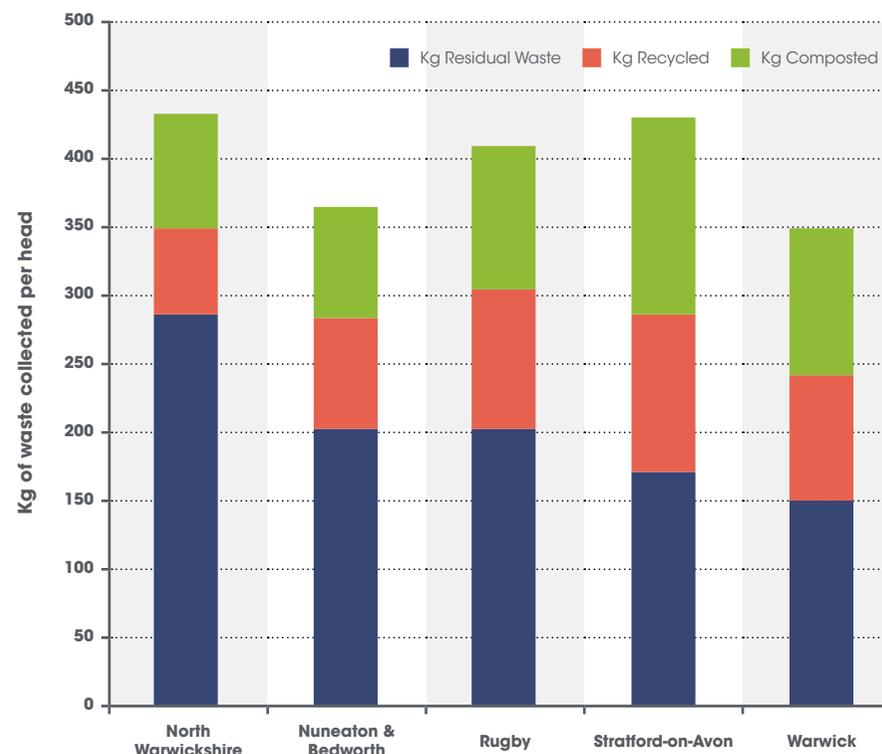
Figure 8.17: Warwickshire Waste Indicators, 2004-2005 – 2012-2013

| | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Waste per head of population (kg) | 556kg | 550kg | 547kg | 539kg | 522kg | 510kg | 493kg | 469kg | 461kg |
| Cost per tonne of waste (£) | £30.81 | £36.28 | £37.55 | £41.89 | £55.87 | £58.25 | £63.55 | £66.06 | £67.13 |
| Total waste recycled (%) | 13.8% | 14.5% | 15.9% | 17.5% | 21.5% | 23.8% | 23.4% | 24.3% | 26.2% |
| Total waste composted (%) | 13.8% | 15.4% | 16.8% | 17.9% | 21.7% | 24.3% | 25.7% | 24.5% | 26.2% |
| Recycled and composted (%) | 27.6% | 29.9% | 32.7% | 35.4% | 43.2% | 48.1% | 49.1% | 48.8% | 52.4% |
| Waste to energy recovery (%) | 3.8% | 4.9% | 7.2% | 6.6% | 7.0% | 10.15% | 18.4% | 15.3% | 15.7% |
| Landfilled (by difference) (%) | 68.6% | 65.2% | 60.1% | 58.0% | 49.8% | 41.8% | 32.5% | 35.8% | 31.9% |

Source: Warwickshire County Council, Waste Management 2013

Warwick District continues to be the best performing authority with the least kilogrammes of waste collected per head of population, whilst also having the second highest recycling and composting rates in Warwickshire. Stratford-on-Avon District continues to have the highest proportion of waste that is recycled or composted. North Warwickshire Borough has the highest number of kilogrammes of waste collected per head, and also has the lowest proportion of waste that is recycled or composted.

Figure 8.18: Waste performance by District, 2012-2013



Source: Warwickshire County Council, Waste Management 2013



Outlook

The Government Review of Waste Policy includes an aim to continue to increase the percentage of waste collected from both households and businesses which is recycled, at the very least meeting the revised waste framework directive target to recycle 50% of waste from households by 2020. In August 2013 it was announced that Warwickshire's waste targets were updated and recycling targets for the end of the strategy period should be:

- Aim to reduce residual waste to 311 kg per household per year, by the end of the strategy period (2020).
- Aim to achieve aspirational countryside recycling and composting targets of 65% by the end of the strategy period (2020).

In June 2013 the household waste recycling centre at Grendon was replaced by a new household waste recycling centre and waste transfer station at Lower House Farm. The new household waste recycling centre is capable of taking 10,000 tonnes of material a year and the proceeds from the purpose-built charity reuse shop will benefit local community groups and good causes across Warwickshire and Staffordshire through the Heart of England Community Foundation and its sister, Staffordshire Community Foundation. The transfer station can handle up to 90,000 tonnes of waste a year, of which 50,000 tonnes will be kerbside-collected municipal waste from the three collection authorities being delivered to Staffordshire's planned 'Energy from Waste' plant at Four Ashes, and the remaining waste capacity at the facility will help small businesses manage their waste.

Further Information

- Warwickshire County Council has produced a [Waste Minimisation Strategy](#) that provides a framework for addressing waste minimisation until 2015 and a new business plan was produced by the Warwickshire Waste Partnership in 2011.
- Information about household waste management in Warwickshire is available from the Waste Management Team, telephone number 01926 410410.
- Information on recycling can be obtained by contacting 01926 418088 or via the website www.warwickshire.gov.uk/recycling. Warwickshire's existing Waste Strategy can be found at www.warwickshire.gov.uk/wastestrategy
- Review of Waste Policy in England 2011 (Defra): <http://bit.ly/O42fdM>
- Warwickshire Waste Partnership: <http://www.warwickshire.gov.uk/wastepartnership>

Description

The Met Office defines the difference between weather and climate in terms of time. Weather is the change that occurs hourly or daily (for example, temperature, rainfall and wind speed) and climate is the average weather that is expected or experienced over a longer period of time. A climate system is created through the interaction of the atmosphere with oceans, ice sheets, land masses and vegetation, plus the impact of the sun.

Climate zones have been identified by scientists with the zone in the United Kingdom being classified as temperate. This means that, when compared to other climates, it is 'average', which means neither excessively hot or cold nor wet or dry.

This indicator focuses on recorded changes in climate and weather in the Midlands and Coventry and the potential impact on Warwickshire's communities.

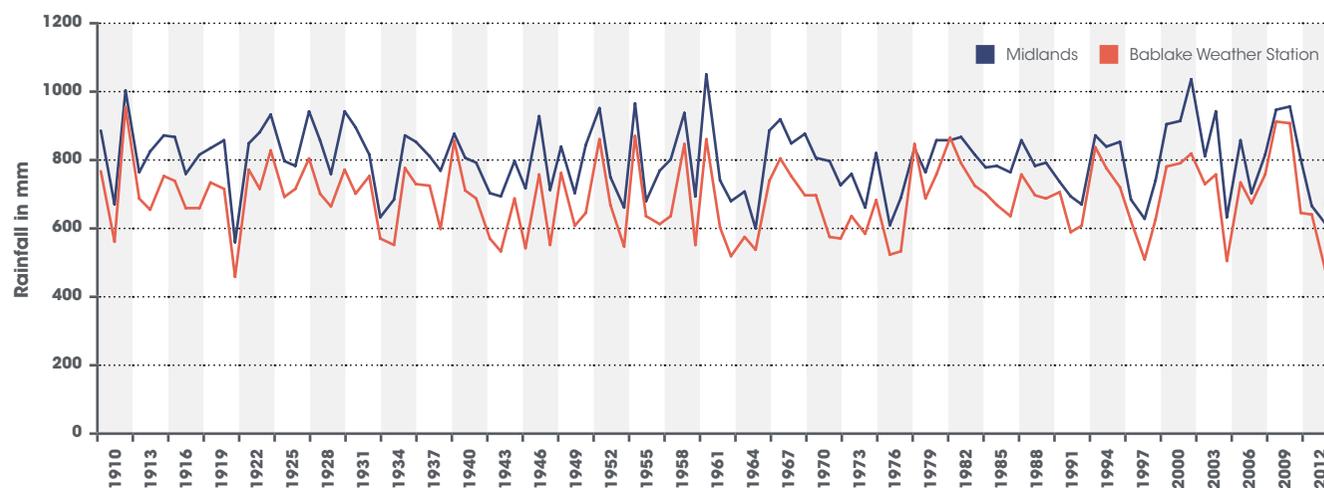
Performance

The Met Office collates data on rainfall, temperature and sunshine levels for regions in the United Kingdom. The Bablake Weather Station in Coventry has been recording weather data since 1870 and this gives a more local picture of fluctuations in the last 140 years.

Rainfall

Data from the Met Office shows that, nationally, 2012 was the second wettest year since 1910 and the wettest since 2000. Two months in the year – April and June – were the wettest, with 128 mm and 149 mm falling in respective months. In the Midlands, 2012 saw the highest levels of rainfall since 1910 with a total of 1,085 mm falling in the year. However, the years of 2010 and 2011 were relatively dry years, which led to concerns in the early months of 2012 about drought.

Figure 8.19: Rainfall in the Midlands and Coventry



Source: The Met Office, Bablake Weather Station, 2013

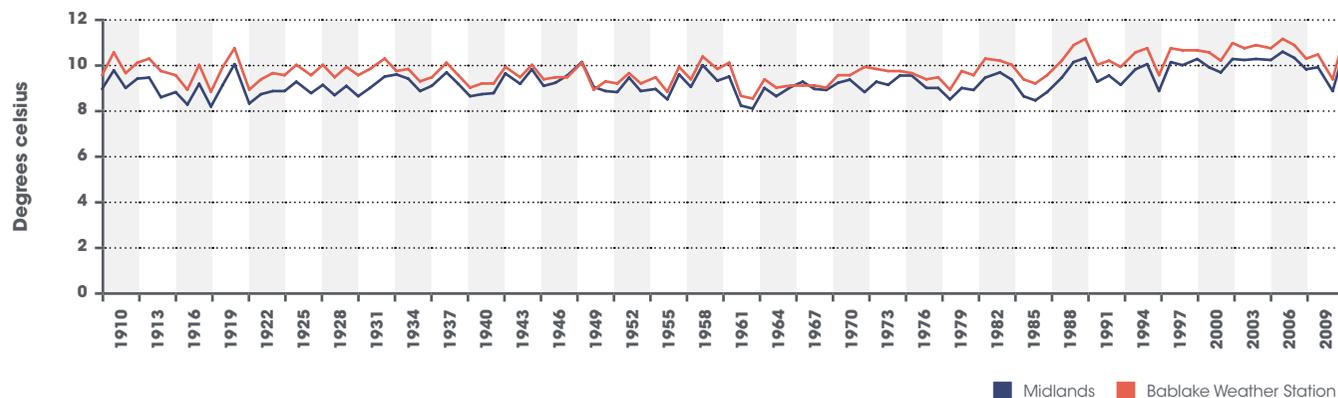
To help address problems with flooding, the Environment Agency and Warwickshire County Council are continuing to undertake flood risk management schemes. Last year the County Council spent a total of £128,000 on flood risk management and have identified fourteen schemes for which they are seeking funding. Working with partners has also encouraged their investment in flood risk management in Warwickshire. For example, between April 2010 and August 2014, Severn Trent Water will have spent over £26 million on sewer improvements in Leamington Spa alone, bringing direct benefits to over 110 properties. This includes the Gresham Avenue flood alleviation scheme in which Warwickshire County Council and Warwick District Council agreed to undertake ongoing maintenance to secure the £670,000 scheme. Since 2011 the Environment Agency has spent £1.8 million on flood alleviation schemes in Warwickshire benefiting around 300 properties.

Climate and Weather

Temperature

Between 1910 and 2012, the mean temperature recorded by the Met Office in the Midlands has fluctuated year on year but overall has shown a slight increase. The records from Bablake School show a similar trend but with temperatures generally being higher than those recorded in the Midlands. The warmest year on record in the Midlands was 2011 with a mean temperature of 14.6°C and the coldest year was 1919 when the average minimum temperature was recorded as 3.9°C. The years of 1990, 2006 and 2011 were the warmest years recorded at Bablake Weather Stations (11.1°C) with the coldest being 1963 (8.3°C).

Figure 8.20: Mean annual temperature in the Midlands and Coventry



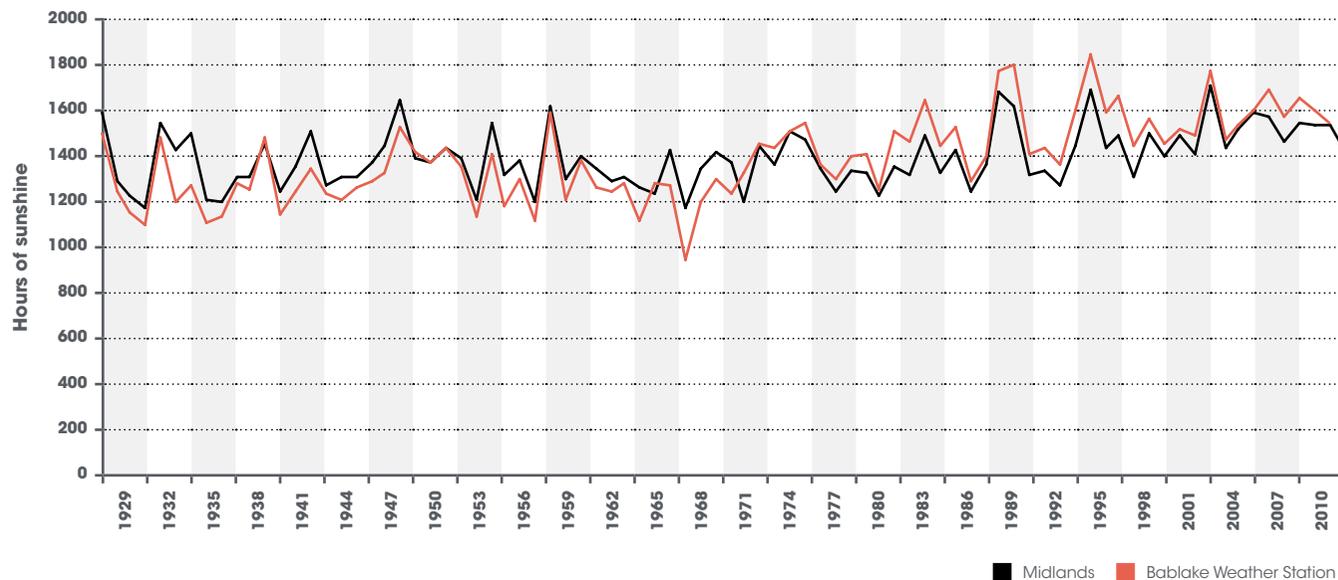
Source: The Met Office, Bablake Weather Station, 2013

Sunshine

Data from the Met Office shows that 2003 was the sunniest year in the Midlands since 1929 with a total of just over 1,685 hours of sunshine. More locally, 1995 was the sunniest year with 1,821 hours recorded at Bablake Weather Station in Coventry. Figure 8.21 shows both sets of records between 1929 and 2011.

Over the last 82 years there have been some marked fluctuations in the hours of sunshine in both areas. The overall trend for both however shows an increase in hours recorded.

Figure 8.21: Annual sunshine in the Midlands and in Coventry



Source: The Met Office, Bablake Weather Station, 2013

Outlook

According to the Met Office there is evidence that, overall, the global climate is warming. This evidence includes increasing ocean temperatures, changes in rainfall patterns, rises in sea level and melting glaciers. In the last 100 years there has been a 0.75°C rise in the Earth’s temperature.

Year on year, however, there are fluctuations in the weather and even relatively small changes in the weather can have an adverse impact on people, either directly or indirectly. The Heatwave Plan for England 2013 (Public Health England) gives details of the Heat-Health Watch alert system which operates in England from 1st June to 15th September each year. These levels are given in Figure 8.22.

Figure 8.22: Heatwave Alert levels

| | |
|---------|---|
| LEVEL 0 | Long term planning All year |
| LEVEL 1 | Heatwave and summer preparedness programme 1 June – 15 September |
| LEVEL 2 | Heatwave is forecast – alert and readiness 60% of heatwave in the next 2-43 days |
| LEVEL 3 | Heatwave Action Temperature reached in one or more Met Office National Severe Weather Warning Service regions |
| LEVEL 4 | Major incident - Emergency response Central Government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health |

Source: Heatwave Plan for England 2013, Public Health England

These alerts are needed as excessive temperatures can kill. In a 2006 heatwave, it was estimated that there were approximately 680 excess deaths compared to similar periods in previous years and in 2009 there were approximately 300 excess summer deaths compared to similar periods in previous years. At the time of writing this indicator the first half of July 2013 had been warmer, drier and sunnier than usual with 11 days of temperatures over 28 °C recorded somewhere in the UK. This made it the longest hot spell since 2006.

Cold winter weather can also lead to excessive deaths, for example in 2010/11, there were 23,700 more deaths in England between the months of December 2010 and March 2011 than the average for the rest of the year (Cold Weather Plan for England: Protecting health and reducing harm from severe cold, Department of Health, 2012). There is also an increased risk of slips and falls in icy conditions which can lead to injuries.

Excessive heat can also impact on the transport infrastructure – in the heatwave experienced in July 2013 it was reported that the road surface of the M25 had begun to melt. Conversely cold temperatures can also cause travel disruption, especially if heavy falls of snow are experienced.

Problems with flooding are continuing to be addressed in the county, both through flood alleviation schemes and working with communities to build personal and community resilience to future flooding events. To help with the latter, Warwickshire County Council, in partnership with the districts, has secured funding from the Defra Pathfinder scheme to deliver a programme of work with a number of communities across the county identified as being particularly at risk of flooding. The two year programme of work will be led by the National Flood Forum.

Further Information

- Further information can be obtained from the Met Office: <http://www.metoffice.gov.uk/climate-change>
- Bablake Weather Station: <http://bws.users.netlink.co.uk/>
- Public Health England’s Heatwave Plan for England 2013: <http://bit.ly/YZwniR>
- Department of Health’s Cold Weather Plan for England 2012: <http://bit.ly/12FU2IP>
- Warwickshire County Council Flooding Team can be contacted using the following number: 01926 412781 or visit: <http://www.warwickshire.gov.uk/flooding>
- For more information on the impact of changes in climate on public health, please contact Warwickshire County Council’s Public Health Team on 01926 413774 or visit: <http://publichealth.warwickshire.gov.uk/>



Description

Poor air quality is a key issue for society as it can impact on health and the wider environment. It can be particularly harmful for the most vulnerable members of society such as young children, the elderly, and those with pre-existing illnesses such as asthma, heart disease, or other cardio-respiratory conditions. Long term exposure to poor air can reduce life expectancy by an average of 7-8 months and result in thousands of hospital admissions at a cost of up to £20 billion each year to the NHS (Warwickshire Director of Public Health Annual Report, 2013).

Performance

Warwickshire County Council's Local Transport Plan (LTP) 2011-2026 contains an Air Quality Strategy which provides an overview of the impact of poor air quality, outlines the national policy context, and lists the seven key pollutants considered in the UK Air Quality Strategy. The LTP Air Quality Strategy also contains six strategic policies, highlighting the air quality problems specific to Warwickshire and ways in which the County Council will try to help address these.

The five Warwickshire District and Borough Councils are responsible for monitoring air quality (through the Clean Air Legislation and control of emissions from smaller industrial and commercial premises) and for land-use planning (development control and the preparation of Local Development Frameworks which set out future growth proposals for housing and employment).

Recent performance and trends across Warwickshire:

North Warwickshire Borough

There have been no new objective level exceedences in recent years in North Warwickshire. There has also been a continued reduction in annual mean levels of nitrogen dioxide (NO₂) at an affected farmhouse in the Air Quality Management Area (AQMA), which in recent years has fallen, and continues to fall, below the objective level. The farmhouse has also been vacant since 2008 and has fallen into a state of disrepair, and is likely to be used for other non-habitable purposes in the future.

During the previous round of assessment in North Warwickshire it was proposed to revoke the AQMA as it no longer exceeds the objective level for NO₂. This was agreed by Defra and the AQMA was formally revoked by North Warwickshire Borough Council from 1st February 2013.

Nuneaton & Bedworth Borough

The main source of air pollution in the borough is road traffic emissions from major roads locally, notably the A444, A47, A5 and M6, although other pollution sources, including commercial, industrial and domestic sources, also make a contribution. An AQMA was declared in March 2007 along the A47 Leicester Road in Nuneaton town centre where exceedences of the annual mean objective for NO₂ were observed. A second AQMA was declared for NO₂ in October 2009 encompassing an area of Nuneaton from Midland Road to Corporation Street.

The 2013 Local Air Quality Management Progress Report, concluded that new diffusion tube monitoring data had identified five locations where the annual NO₂ objective was exceeded in 2012, all of which were within the existing AQMA. Continuous data for 2012 showed that the annual mean and the hourly mean objective for NO₂ had been met at the Leicester Road monitoring location. The annual mean however was close to the objective at this location and had shown a minor increase from the previously available monitoring data. The majority of the diffusion tube results also showed an increase in annual mean NO₂ concentrations when compared to the 2011 results.



Rugby Borough

Rugby Borough Council declared a single AQMA that covers the whole urban area of Rugby bounded by the southern boundary with Daventry District Council, A5, M6, minor roads to the west of Long Lawford, A45 and M45.

In April 2012, the diffusion tube monitoring network was expanded from 17 sites to 48 sites in preparation for the decommissioning of continuous monitoring activities in the borough. Exceedences of the annual mean NO₂ objective were monitored at two of the new monitoring locations and new exceedences were identified at Dunchurch and Whitehall Road, Hillmorton. Annual mean NO₂ concentrations at diffusion tube locations that have previously shown exceedences were within the annual mean NO₂ objective in 2012 and continued a trend of downward concentrations at these locations.

PM10 monitoring in the borough ceased in June 2012 as annualised mean PM10 concentrations were well within the annual mean PM10 objective at all monitoring locations. PM10 concentrations observed in Russelsheim Way in 2012 appeared unreliable and further investigation concluded that the data should be rejected. This means that the short-term PM10 objective was not exceeded at any monitoring location within the borough.

Rugby Borough Council has concluded that there is no requirement to proceed to a detailed assessment for any pollutant currently. However, an assessment is to be carried out of the biomass boiler within the Queen's Diamond Jubilee Leisure Centre to determine the potential for adverse impacts on local air quality. The Council will continue with the current level of diffusion tube monitoring and report updated NO₂ concentrations when a full calendar years' worth of data is available and, where necessary, investigate Action Plan measures to improve air quality in those areas.

Stratford-on-Avon District

The key pollutant of concern in Stratford-on-Avon District is NO₂. Over the past three years there has been a significant reduction in NO₂ levels at most of the monitoring positions and, as a result, and with Defra's agreement, the declaration of the Henley-in-Arden AQMA has been postponed. Similarly, the Action Planning process for Stratford town has been halted, pending further traffic monitoring and assessment work.

Improvements have also been noted within the Studley AQMA but further reductions are needed and discussions are taking place with the County Council's Transport Planning team, to progress the Action Plan there.

Warwick District

There are currently five active AQMAs within the district covering locations across Warwick, Leamington and Kenilworth town centres. NO₂ concentrations continue to be monitored using both automated monitoring stations and a network of passive diffusion tubes.

In April 2012, a new automatic monitoring station was installed at Rugby Road, Leamington Spa. This is a roadside station which now operates in addition to an existing monitoring site in Leamington. The District Council also operates a third monitoring station in Warwick town centre.

An Updating and Screening Assessment completed in 2012 identified that Charles Street in Warwick was at risk of exceeding the NO₂ annual mean objective and as a result a detailed assessment was carried out in June 2013 to determine whether an AQMA should be declared there. The assessment concluded that an AQMA was not required at this location.

A Low Emission Zone Feasibility Study has also been completed in 2013 using Defra funding. This focused on the potential for Low Emission Zones and/or Strategies that might address the most polluted areas identified in Warwick, Leamington Spa and Kenilworth.



Outlook

Nuneaton and Bedworth Borough Council are preparing a new Borough Plan that will play a key role in shaping the future of the borough up to 2028. The Plan will influence what development takes place, the scale of it, and where within the borough it will be located. As it will plan growth and new infrastructure - for example, homes, roads, schools, shops and services, alongside influencing how development takes account of environmental issues - it will have an impact on future air quality locally.

Rugby Borough Council has identified a number of major local developments that have the potential to impact upon local air quality. New developments at Rugby Mast Site Sustainable Urban Extension (SUE) and Daventry International Rail Freight Terminal (DIRFT) are currently at the planning stage and are subject to their own air quality assessments. The findings of the reports associated with these and other local developments, and the implications for local air quality in Rugby will be reported in a future LAQM report once full details are available.

Warwick District Council is also in the process of developing its new Local Plan to shape development that takes place in the district over the next 15 years. The proposed Plan makes provision for a significant number of new residential developments along with employment land and necessary improvements to infrastructure and transport networks. Work is currently being carried out to assess the impact that such growth is likely to have on the district's air quality in order that suitable mitigation measures might be included as early as possible. In addition, Low Emission Strategies will also be considered, to address emissions associated with diesel passenger cars which currently make the biggest contribution to NO₂ concentrations across the district's town centres.

Stratford-on-Avon District Council is currently producing its Core Strategy which will establish the scale of development up to 2028. Currently, the scale of development proposed for Stratford town is around 700 dwellings over and above that which already has planning permission. It is recognised that the town already experiences pressure from high levels of traffic and the impact that has on the environment.

A new settlement is proposed adjacent to J12 on the M40. One of the issues to address is the impact of emissions from motorway traffic on future residents at that location.

Further Information

For further information on the causes and effects of air pollution and what is being done to improve air quality, visit www.airquality.co.uk/archive.

Information on Warwickshire's Air Quality Strategy can be found at <http://bit.ly/1b3RA22> and district action plans can be found on their individual websites.

More information on Air Quality Management Areas can be found on the Department for Environment, Food and Rural Affairs (Defra) website:

<http://www.defra.gov.uk/environment/quality/air/air-quality>