

Wiltshire Highways Maintenance Programme 2019/20



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Contents

Background

Investment in Local Highways

Comparison with Other Authorities

Road Maintenance

Other Highway Assets

Bridges

Integrated Transport Schemes 2019/20

Future Highways Investment Proposals

Road Surfacing Proposals 2019/20

Background

Wiltshire Council is responsible for the maintenance of the local road network in Wiltshire, excluding the motorways, trunk roads and those in private ownership. The highway network is vital for businesses and communities, and effective maintenance to ensure its availability is essential to the economic development of the county.

The local highway network in Wiltshire comprises over 4,400 kilometres of road and almost 1,000 bridges. Wiltshire Council recognises the importance of maintaining and managing its highway network effectively, and has been making a significant investment in improving the condition of its highways assets in recent years.

The weather was a particular challenge for road maintenance in 2018, with a very cold winter causing freeze and thaw damage, and then a very hot summer causing some roads to melt and surfaces to deteriorate.

Investment in Local Highways

The Council's 'Local Highways Investment Fund 2014 – 2020' was introduced to address the longstanding under investment in highways maintenance and the consequent backlog of maintenance, which have been problems nationally for many years. The Council's programme of major investment in highway maintenance is intended to deliver and sustain a significant improvement in the condition of the county's highway network.

The first four years of the programme saw significant increased investment in the county's road network with a budget of £21 million annually for road major maintenance. This reduced slightly in 2018/19, but will increase again in 2019/20 to a level similar to those of previous years.

A large programme of road resurfacing was undertaken in 2018/19.

| Road class | A | B | C | Un-classified | Total |
|------------------------------|------|------|------|---------------|-------|
| Length treated 2017/18 Km | 46.8 | 21.2 | 48.5 | 29.6 | 146.1 |

A substantial amount of road resurfacing work has been undertaken in Wiltshire in recent years, with considerable lengths of road resurfaced:

| Year | Length treated (kilometres) |
|--------------|-----------------------------|
| 2014/15 | 148 |
| 2015/16 | 182 |
| 2016/17 | 250 |
| 2017/18 | 181 |
| 2018/19 | 146 |
| Total | 907 |

There have been 907 kilometres of road resurfaced in the five years since 2014, which is about 20% of the network.

There have also been many smaller sites treated with hand patching and repairs to address localised areas in poor condition. Over 58,000 square metres of road were repaired in 2018/19 in addition to the lengths of road surfaced described above.

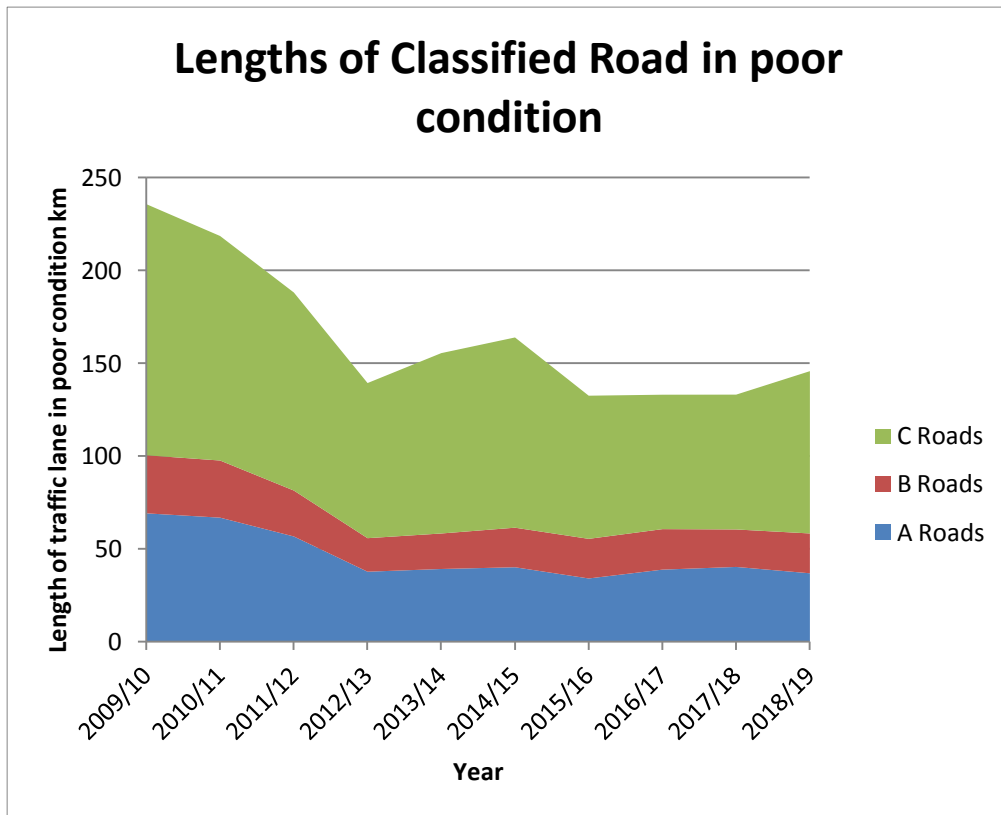
| Road Class | Area of Road Repaired (Sqm) |
|-------------------|------------------------------------|
| A | 11,699 |
| B | 7,719 |
| C | 21,965 |
| Unclassified | 17,161 |
| Total | 58,544 |

The repairs have been carried out across all of the Area Boards in 2018/19.

| Area Board | Area of Road Repaired (Sqm) |
|----------------------|------------------------------------|
| Amesbury | 3,669 |
| Bradford on Avon | 3,885 |
| Calne | 1,441 |
| Chippenham | 2,207 |
| Corsham | 2,386 |
| Devizes | 2,431 |
| Malmesbury | 3,496 |
| Marlborough | 3,546 |
| Melksham | 2,863 |
| Pewsey | 3,841 |
| RWB & Cricklade | 4,450 |
| Salisbury | 2,999 |
| South West Wiltshire | 7,170 |
| Southern Wiltshire | 1,156 |
| Tidworth | 1,316 |
| Trowbridge | 1,622 |
| Warminster | 9,261 |
| Westbury | 807 |
| Total | 58,544 |

It should be noted that the quantities of repairs in each Area Board will vary from year to year according to need.

There has been a significant reduction in the length of road in poor condition in Wiltshire, which has almost halved since 2009. This has been largely due to the additional funding provided by the Council, which has helped reduce the backlog and prevented further deterioration.

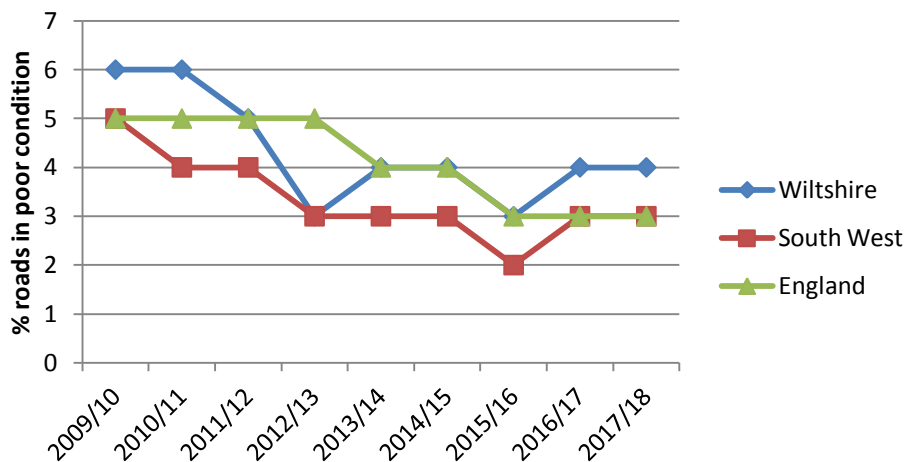


Without the investment to improve the condition of the roads, they would have deteriorated at an increasing rate over the last decade, and the lengths of road in poor condition would have increased rapidly.

Comparison with other authorities

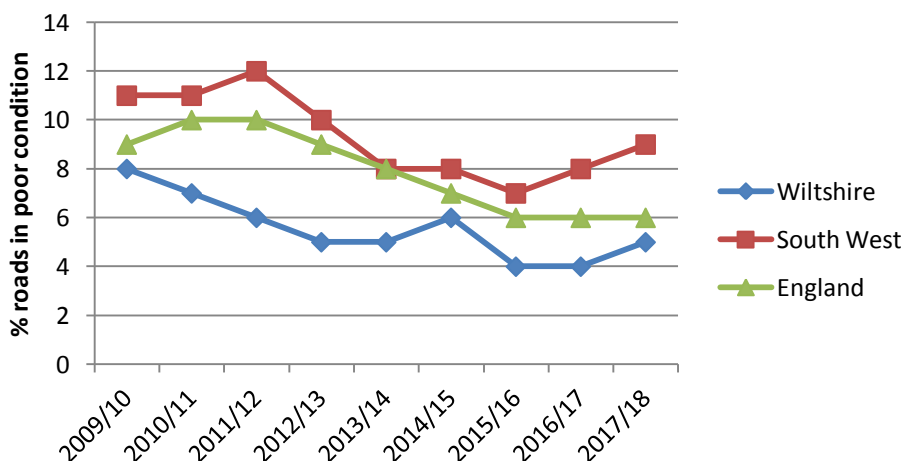
The condition of A class roads has improved nationally since 2009 from 5% in poor condition to 3% in poor condition in 2016/17 (Note - Low percentages are good). In Wiltshire the A class roads have improved, but they are still slightly above the national and south-west averages. It is anticipated they will be much closer to the average next year following the work carried out in 2018/19.

A Class roads in poor condition



The B and C class roads represent 45% of the road network by length in Wiltshire, which is a large proportion of the network. Keeping these roads in good condition is important to the local communities, and requires substantial investment.

B and C class roads in poor condition



The B and C class road conditions in Wiltshire are better than the national average and much better than the south-west average. There was a slight increase in the percentage of B and C class roads in poor condition in Wiltshire in 2017/18, but this appears to be typical of roads in the south west.

The condition of the unclassified roads is more difficult to compare as the assessment methods have not been consistent across authorities. In general terms the condition of the more important unclassified roads in Wiltshire compares well with those of similar authorities in the south west, but further assessment will be needed to get a better understanding of minor road conditions across the south west.

Overall the condition of roads in Wiltshire compares favourably to most conditions nationally and in the south west. However, there is further work required, especially on the county's A roads and on the minor road network. More detailed surveys are proposed to be undertaken in Wiltshire in 2019/20 to obtain better information on the condition of the unclassified roads, and to assist in prioritising further investment.

Road Maintenance

The funding levels for road resurfacing and related work in Wiltshire have been proportionally higher than for most authorities in recent years because of the additional funding provided by this Council. An initial six year programme was developed in 2013, and progress on implementing it has been reported annually to the Council's Area Boards and the Environment Select Committee.

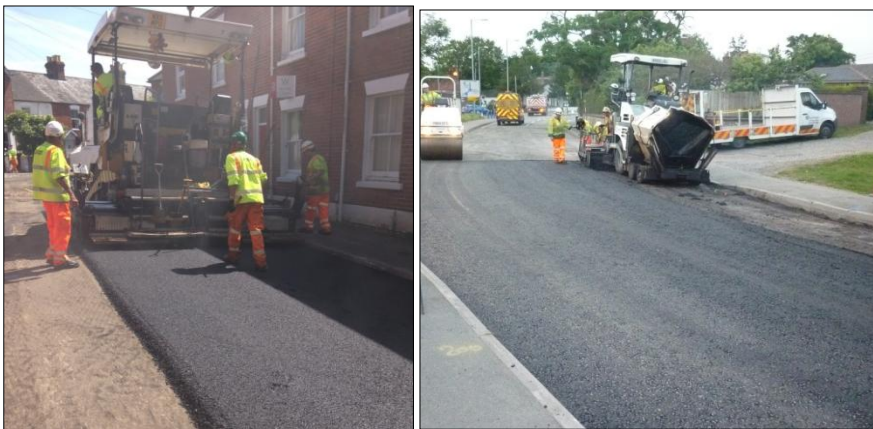
Good progress has been made on delivering the original programme, with the programme now substantially complete. However, there are still a few sites which were included in the original programme, or have subsequently been added for treatment, which have yet to be completed. These will be included in the new forward programme.

The condition of the network has been reviewed in order to develop a new five year programme for highway maintenance. The Council's new Highways Infrastructure Asset Management System (HIAMS) is being used to help derive the future works programme to ensure best value for money and whole life costing for the highways asset. The new system provides the opportunity to carry out more detailed calculations regarding road condition and deterioration to inform investment decisions.

The road maintenance programme for 2019/20 includes a number of different treatments to address specific problems. The proposed sites have been inspected in detail in order to determine the most appropriate treatment or surfacing materials. The main treatment types are described below.

Road Surfacing

The use of bituminous materials to surface the roads usually produces the most effective and durable surface. The use of hot rolled asphalt with chippings is often preferred in Wiltshire as it is very durable with good skid resistance for most of the types of road and traffic volumes we have in the county. Other materials are used to meet specific needs or constraints.



A large programme of resurfacing across the county is proposed for 2019/20.

At locations which are subject to heavy loadings or extreme stress, specialist treatments are used, including grouted asphalt which provides a particularly strong surface.



Specialist treatments such as grouted asphalt are used at some high stress areas.

Where the lower road construction layers are structurally failing, deeper excavation and renewal is used, provided underground services or structures do not limit the depth of construction. Surveys and assessments are undertaken to ensure that drainage systems are working properly before the road is resurfaced.

Surface Dressing

The use of surface dressing, which is sometimes referred to as ‘tar and chippings’, is a traditional method of surfacing which has been used for decades on rural roads.



An extensive programme of surface dressing helps seal and protects the county’s rural roads, and improves skid resistance.

It is very effective at sealing the underlying road construction and provides good skid resistance. It is usually not as durable as bituminous resurfacing, but it is a very cost effective treatment if it is carried out regularly. Any weak areas of road are ‘patched’ before the surface dressing is applied.

Pre Surface Dressing Patching

The opportunity is being taken to carry out patching and localised repairs this year on some of those roads which are likely to be included in the surface dressing programme for 2020/21 or in future years. This has the benefit of addressing the sections of a road in worst condition early, and provides a solid base for the subsequent surface dressing.

Texture Treatment

It is important that roads have adequate skid resistance. Higher skid resistance is required on bends and at the approach to junctions. Specialist surveys are undertaken of the main roads to assess the existing surface condition, and identify where treatment is needed.

On some roads resurfacing may be required, but at other locations it is possible to use shot or water blasting to improve the texture. The site assessments are currently underway to identify suitable sites for this type of treatment in 2019/20.

High Friction Surfacing

At some key locations, such as the approach to traffic signals, the use of special high friction surfacing may be used to improve safety. Because of the high stresses at these locations these surfaces may need more frequent renewal. A programme of replacement using potentially more durable materials at these sites will be undertaken as a rolling programme.

Carriageway and Pothole repairs

The Council operates three Pothole Gangs to make emergency repairs and two Patching gangs to make more substantial repairs.



Pothole Gangs respond to defects and potholes on the network

These resources are deployed to address problems as they occur. Last year over 10,000 potholes were filled, which was a substantially more than usual because of the severe winter. Generally there are about 6,000 potholes each year on the network, but the number can increase substantially when there is extreme weather.



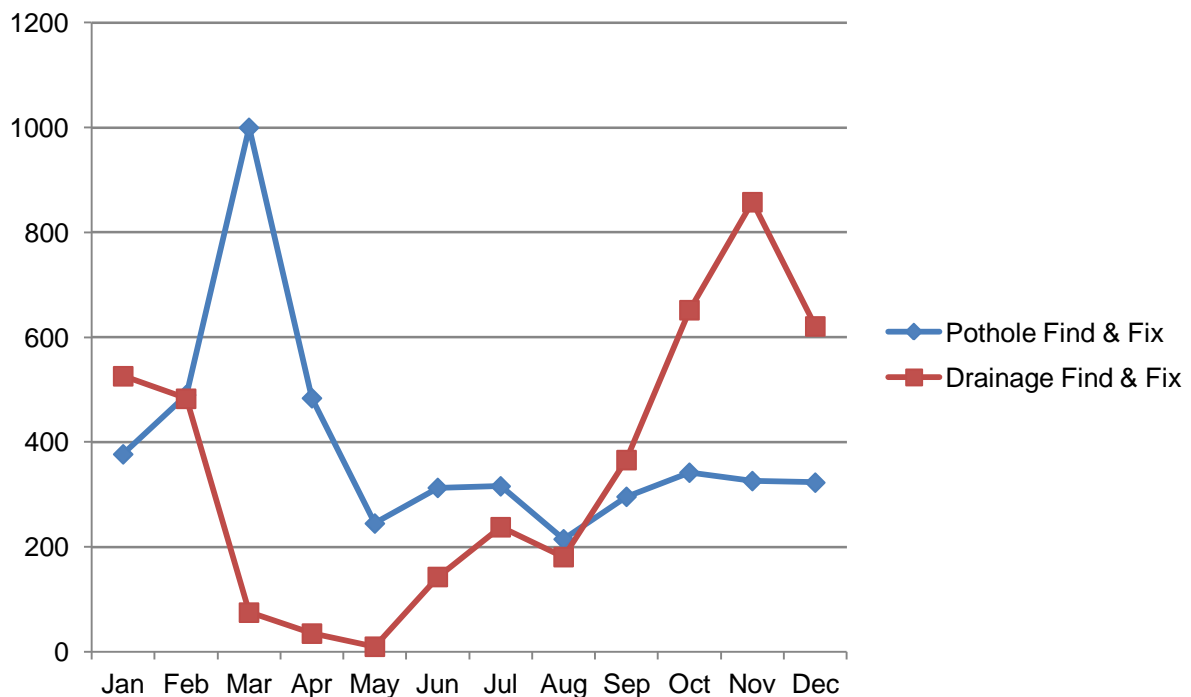
Potholes and highway defects can be reported using the My Wiltshire app, or on the Council's website.

Parish Stewards

The Parish Steward Scheme, which helps to help address the highway priorities of the local communities is provided by the Council's contractor Ringway. The scheme has been a great success and is a well liked and respected service.

As well as the work identified by the town and pariah councils, the Parish Stewards also carry out pothole repairs, address drainage issues and carry out other maintenance work. The type of work varies from month to month depending on requirements.

Parish Steward Work in 2018



In the early months of the year the focus is often on potholes and the need to deal with damaged road surfaces following the winter freeze and thaw damage on the network. In the autumn keeping the drains clear and working is often a priority. In the winter the Parish Stewards are often involved gritting the roads and other winter maintenance operations.

The flexibility that the Parish Stewards bring to routine highway maintenance activities is appreciated, and it offers a cost effective means of dealing with a variety of issues on the highway network.

Other Highway Assets

With an extensive road network and aging infrastructure there is a need to plan for long term renewal of all highway assets as well as the roads. Good progress has been made on reducing the road maintenance backlog in recent years, but further work is still required and other assets, including street lighting, safety fences, road signs, traffic signals and bridges, will need further investment to keep them safe and to avoid unplanned emergency repairs in the future.

Footways

The condition of footways has been a particular concern. A programme of footway renewal schemes was started in 2017/18, but this had to be reduced last year because of budget constraints. The increased budget for 2019/20 is enabling the programme of footway treatment to be continued this year.

Sites for treatment in 2019/20 are currently being assessed.

Drainage

Keeping road drainage operating properly is not only important in order to keep the roads safe for users, but it also helps to prevent damage to the road and its sub-structure. A programme of drainage CCTV surveys is undertaken on the network throughout the year. With the extensive road network in Wiltshire it is taking many years to survey all of the drainage systems, but the Council already has more information than most similar highway authorities.

The drainage pipes can be affected by siltation, tree root damage, ground conditions or public utilities work. Where damage is identified, repairs are programmed and integrated into the programme of road resurfacing and other work.



Underground drainage pipes can be damaged by public utilities works as well as tree roots and silt

Where road drainage pipes are damaged by public utilities the Council seeks to recover the cost of the repair and get the services diverted.

Road Markings

A programme of renewing road markings on the main routes into towns was started two years ago and is continuing in 2019/20 in Royal Wootton Bassett, Devizes,

Cricklade and Westbury. The programme will also address particular sites in other towns in need of treatment for safety reasons.

A programme of rural road markings will also be undertaken to improve markings at rural road junctions. This will concentrate on locations where lines are fading or being worn away and there are increasing safety risks.

Road Signs

A programme of replacing damaged or faded signs started last year. It initially concentrated on the prohibition and safety critical signs. This programme will continue in 2019/20. There are particular problems with posts rusting or being damaged and the programme is intended to address these issues.

Verge Overrun

The rural grass verges can be damaged by large vehicles, or by vehicles leaving the paved surface to pass other vehicles. This is especially a problem during wet weather. A programme of verge repair and hardening has been taking place during 2018, and an expanded programme will take place during 2019/20 to address those sites with the most damage.

Bridges

A programme of bridge repairs and renewal is included in the programme for 2019/20

| Area Board | Parish | Road | Bridge Name | Work Description |
|-----------------------|------------------------|------------------------|------------------------|---------------------------|
| Bradford on Avon | Staverton & Holt | B3105 | Staverton Mill | Masonry Repairs |
| Bradford on Avon | Bradford on Avon | B3107 | Holt Rd Retaining Wall | Masonry Repairs |
| Chippenham | Chippenham | TS | Saxon Street | Redeck |
| Chippenham | Chippenham | TS | Wessex | Redeck |
| Malmesbury | Ashton Keynes | Cox Hill C21 | Oatlake | Waterproofing |
| Malmesbury | Brinkworth | Dead lane C104 | Dead Lane | Waterproofing |
| Marlborough | Chilton Foliat | B4192 | Skates Corner | Replace with pipes |
| Marlborough | Ramsbury | Stone lane U/C | Stone Lane | Masonry Repairs |
| Pewsey | Manningford | Manor Lane U/C | Sharcott Mill | Redeck |
| Royal Wootton Bassett | Cricklade | Cirencester Rd C124 | Weavers | Waterproofing |
| South West Wiltshire | Quidhampton & Wilton | A3094 | Quidhampton Wylve | Waterproofing |
| South West Wiltshire | Quidhampton & Wilton | A3094 | Quidhampton Nadder | Waterproofing |
| South West Wiltshire | Barford St Martin | A30 | Gall | Waterproofing |
| South West Wiltshire | West Tisbury | Tisbury Gates Lane U/C | East Hatch | Masonry Repairs |
| South West Wiltshire | Sedge Hill & Semley | Share Lane U/C | Share | Strengthening Saddle |
| Southern Wiltshire | Grimstead | Byway | Old Canal | Masonry Repairs |
| Tidworth | Ludgershall | FP | Tidworth Rd Rail | Repairs and strengthening |
| Tidworth | Tidworth | Meerut Rd | Oval | Reconstruction |
| Trowbridge | Trowbridge & Southwick | A361 | Whitrow | Waterproofing |
| Warminster | Heytesbury | Parl Lane U/C | Slaters 2nd | Scour repair, new invert |

Other bridges may be added to the list in response to ongoing bridge inspections.

Integrated Transport Schemes 2019/20

Local safety schemes, traffic management measures, cycling walking schemes are developed through the Community Area Transport Groups (CATGs), or in response to particular issues on the network. The main schemes identified to date for next year are listed below:

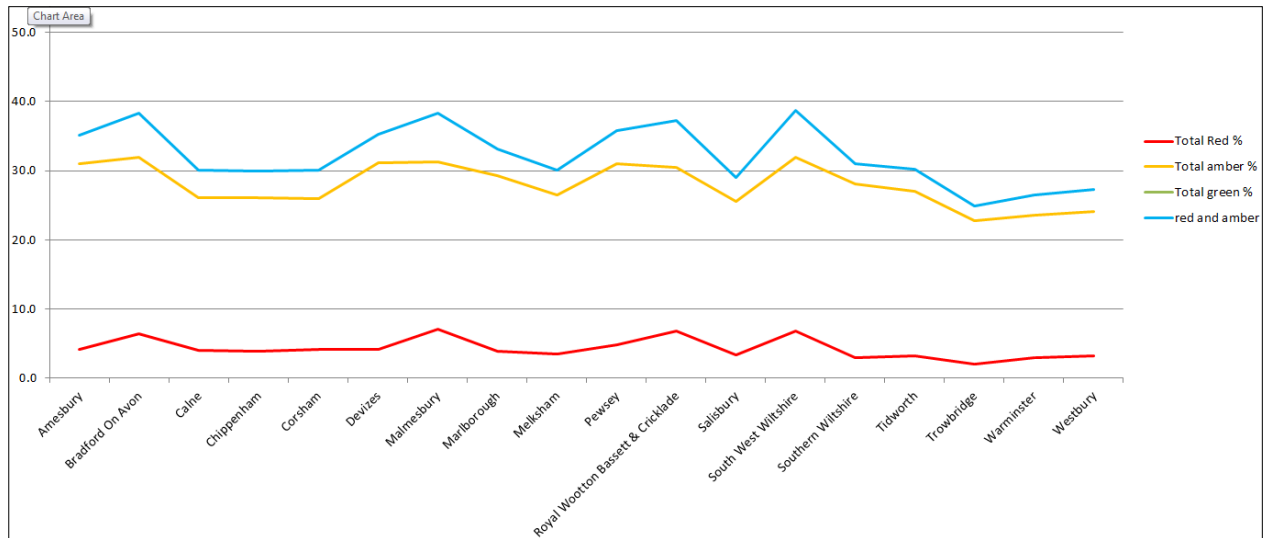
| Community Area | Category | Works | Indicative Budget |
|--------------------|----------------------------------|---|-------------------|
| Bradford on Avon | Substantive CATG | B3108 Winsley Hill at Canal Bridge - Footway | 20000 |
| Calne | Developer Contribution | Calne - Abberd Way to Abberd Brook shared use path | 40000 |
| Calne | Developer Contribution | Calne - Abberd Lane cycle facilities | 30000 |
| Calne | Developer Contribution | Calne - Cycle route across Recreation Ground | 30000 |
| Chippenham | Taking Action on School Journeys | Hardenhuish Chippenham - Advisory 20mph and refuge island improvements | 21000 |
| Chippenham | Highway Improvements | A350 Plough Crossroads traffic signal replacement and upgrade | 300000 |
| Corsham | Local Safety Scheme | A4 Corsham Cross Keys junction - signal replacement and pedestrian upgrade | 200000 |
| Corsham | Taking Action on School Journeys | Colerne Primary - Island replacement, kerbing, & footway, Signs & markings | 34000 |
| Corsham | Taking Action on School Journeys | Neston Primary - Advisory 20mph, road markings, footway | 20000 |
| Corsham | Developer Contribution | Corsham Skynet Drive - Signal control crossing | 30000 |
| Marlborough | Developer Contribution | Marlborough Care Home to Tesco - shared use path (provisional) | 100000 |
| Pewsey | Substantive CATG | C261 Woodborough - Footway | 24000 |
| Pewsey | Substantive CATG | North Newnton Rushall Lane - Footway | 63000 |
| RWB and Cricklade | Substantive CATG | A3102 Tockenham - Safety Measures | 35500 |
| Southern Wiltshire | Developer Contribution | Salisbury Old Sarum Longhedge cycle links | 20000 |
| Tidworth | Substantive CATG | A338 Link Road to Tank Crossing, Tidworth - Footway | 32000 |
| Tidworth | Substantive CATG | A338/Brunton Junction, Collingbourne Kingston - junction improvements | 14600 |
| Trowbridge | Developer Contribution | Trowbridge County Way Hilperton Rd rbt to West Ashton rd rbt - cyclepath | 100000 |
| Trowbridge | Developer Contribution | Trowbridge Moyle Park cyclepath | 50000 |
| Trowbridge | Highway Improvements | A361 Trowbridge County Way / Ashton Street - replace existing signal crossing | 25000 |

There will also likely to be a large number of CATG schemes which will be developed during the year, but have not been identified at this stage.

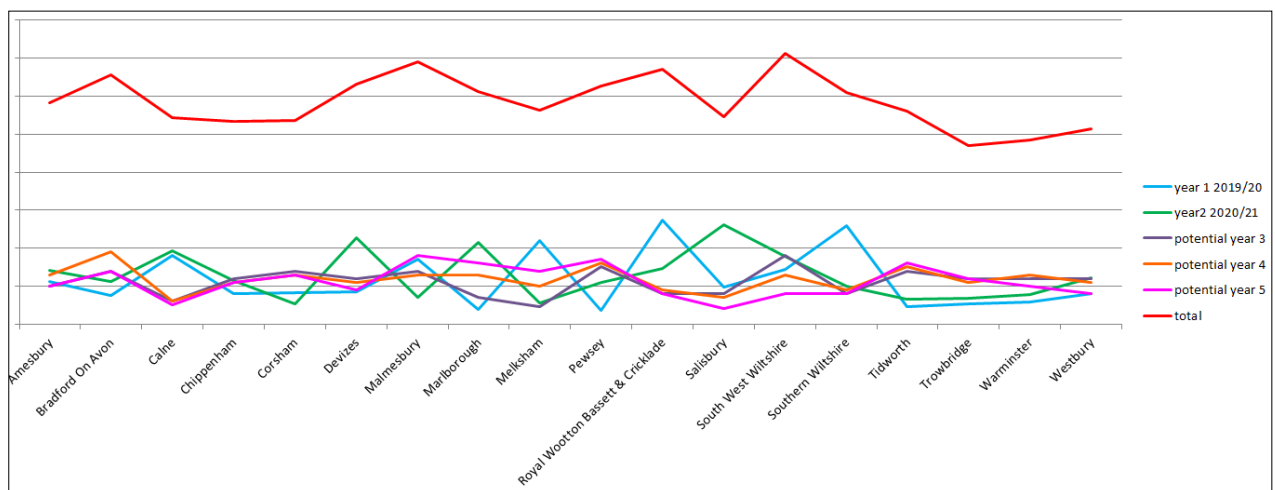
Future Highways Maintenance Investment Proposals

The condition of most of the county's roads is monitored every year using vehicle mounted lasers, and the results of these surveys are reported annually to the DfT. It is proposed to extent these surveys to cover the whole of the network in 2019/20.

The condition of the highway network is monitored according to road type, and on an Area Board basis. The intention is to ultimately achieve consistent road conditions across the network. The current road conditions (showing those in poor or declining condition) for the Area Boards are shown below:



The proposed spending in future years is being developed to address these conditions:



The funding for the maintenance in each Area Board will vary from year to year because of the need to carry out some larger schemes from time to time. Consequently in some years the spend may reduce, and in other years it will be higher. Over the next five year period it is proposed that the overall spend will reflect need based on the road conditions.

Road Surfacing Proposals for 2019/20

A programme of proposed road surfacing has been developed based on the condition survey results and the local engineers' knowledge. The list of sites included as **Appendix 2** of the Area Board reports.

It should be noted that some variations to the proposals may be necessary if circumstances change, particularly as a result of weather damage elsewhere on the network. Some schemes may be delayed if public utilities are carrying out work on the road, as the surfacing will be carried out when that work is completed.

The document also includes an indicative list of the potential sites for treatment in future years. This list is provisional at this stage and is based on anticipated deterioration rates. It will be necessary to review the lists annually to ensure the priority sites are being identified.