Lancashire County Council

Transport Asset Management Plan

(TAMP)

Phase 2 Year 4 Data Refresh - September 2024

Author:- **Paul Binks**

1.0 Executive Summary

The Transport Asset Management Plan (TAMP) was approved by the Cabinet Member for Highways and Transport on 10 June 2014 and identified the key strategic priorities of the county council, as the highway authority for Lancashire, during the period 2015/16 to 2029/30.

TAMP Phase 1 ran from April 2015/16 to March 2020. During this phase our focus of attention was the A, B & C and Footway assets. As a result of works carried out over this period the condition of both these assets as measured by SCANNER (A, B & C Roads) and defects (Footways) showed an improvement.

As we moved into Phase 2, our life cycling modelling suggested that additional works were needed to the A, B & C out in order to maintain the progress made in Phase 1 and that the Unclassified Roads which are the focus of Phase 2, are in a poor condition.

The financial constraints that we experienced in Phase 1 are now more acute following a further reduction in funding from the Department of Transport and recent inflationary pressures. Throughout Phase 1 we adopted an approach whereby the underlying condition of the network was addressed via the use of early intervention preventative maintenance strategies, as we believed this would enable us to make more efficient use of our resources and this will continue into Phase 2.

This approach has seen improvements in the condition of our A, B & C roads which are now in a better condition than they were in 2009 and since 2014. According to the May 2024 SCANNER survey the quantity of **Red** or **Amber** has reduced by 278km from the 2014 base, an improvement of 33%. The general improvement in the A, B & C road network has returned many of these roads to their pre-2014 condition across all district areas.

More than a quarter of the unclassified residential and unclassified rural roads are end of life (**Red**) and this backlog will not be addressed before the end of Phase 2 (March 2025). At the same time, we have been able to currently maintain most of other assets in a similar condition to what they were in 2015, though the condition of the street lighting columns and traffic signal sites is starting to decline; however the scale of the backlog for all asset groups is now becoming apparent as result of Lifecycle Modelling and the overall TAMP objective of getting all assets to a 'good' standard by the end of the TAMP period is unlikely to be met.

Emerging problems have been identified with regards street lighting and traffic signal equipment which are showing signs of increased decay due to insufficient funding to address the backlog. Increased lighting column testing and focusing on only replacing obsolete or redundant aspects of signal junction, rather than replacing the whole junction where possible, are being used to risk manage these assets.

Using the TAMP methodology outlined in Section 10, the overall condition of our highway and transport assets score has been adjusted to take account of the change in Service Standards for Phase2 of the TAMP. The score has reduced slightly from

last year which means that overall condition of our assets is regarded as ACCEPTABLE, having slipped from FAIR. Real progress in improving the condition score of our assets is dependent upon the condition of our unclassified roads improving as they are our greatest value asset in poor condition.

The principal challenges facing us are:

1. How to maintain the progress in the improvement in the ABC road condition since the start of the TAMP.
2. How to address the back log in the unclassified network in Phase 2 of the TAMP whilst maintaining the other asset in a safe condition.
3. Understand the backlog for Street Lights, Traffic Signals and Structures and develop an approach to manging these whilst seeking funding sources.
4. Develop and understanding of the impact of Highway Maintenance activities on carbon (CO_2e) generation and develop strategies to reduce this during Phase 2 of the TAMP and develop a provisional plan to work towards net zero.

2.0 Introduction

The Transport Asset Management Plan (TAMP) was approved by the Cabinet Member for Highways and Transport on 10 June 2014 and sets out how the county council intends to manage its transport assets over the 15-year period from 2015/16 to 2029/30.

In order that the TAMP can remain a live and current document we have provided provide annual updates which contain additional information to supplement the TAMP.

It is intended that these updates will provide a summary of external pressures within the highway sector and internal initiatives that will impact of the county council's highway and transport asset network. This update relates to the fourth year of TAMP Phase 2, and includes information relating to: -

1. Climate Change challenges and journey towards net zero carbon
2. Corporate Priorities and Alignment to the Local Transport Plan and the Highways and Transport Strategy
3. Department for Transport (DfT) funding 2022-2025
4. Performance Management Information
5. Customer Feedback
6. Revised asset condition data
7. Overall Condition Assessment

3.0 Climate change challenges and journey towards net zero carbon

In December 2020, Full Council adopted a resolution to set out on an ambitious carbon reduction and nature recovery strategy that seeks to 'transition the Lancashire economy away from carbon by 2030 and address the biodiversity crisis'. The Highways Decarbonisation Strategy, approved by Cabinet in April 2022, has been developed to reflect this 2035 carbon budget and the Full Council resolution and to support the Corporate Priorities, in particular the need to protect our environment by putting in place a Strategy to achieve a realistic carbon reduction from highways maintenance and highway related activities.

In September 2022 we were awarded the Chartered Institute of Highway and Transport (CIHT) & Ringway Climate Change Award for the development of the strategy. During 2024 Lancashire County Council were co-presented with the same award for a project utilising Foamix Eco carbon-neutral material for road building, with the solution trialled on the M65 slip road. ‘Foamix’ refers to the injection of water and compressed air into bitumen to make it foam, reducing its viscosity while massively increasing its volume. As a result, the cold recycled aggregate used in the process can be fully coated this way even when damp, rather than dry and hot like traditional asphalt.

Recent work to resurface part of School Road in Fylde, following the completion of the new M55 to Heyhouses Link Road, for the first time used two CO_2 saving techniques together, by recycling around 1,000 tonnes of the old road surface and binding the new surface together with a biogenic binder.

In order to measure the carbon efficiencies, it was proposed to report separately a metric for Surface Dressing and a metric for Resurfacing Works. Surface Dressing by its nature does not vary in depth and is best considered as the amount of carbon per unit area: $KgCO_2e$ per m^2. Resurfacing however will vary in depth and is best considered as the amount of carbon per unit volume or tonnage: $KgCO_2e$ per tonne. The estimate for the last 4 years are as below:

Surface Dressing

Financial Year	Area Treated (m^2)	total tonnesCO_2e	$KgCO_2e$ per m^2 work done
2021-22	657,980	850	1.3
2022-23	432,621	633	1.5
2023-24	560,154	826	1.5
2024-25	528,024	1,020	2

Resurfacing Works

Financial Year	Area Treated (m2)	Quantity Asphalt material used (tonnes)	Total carbon Footprint tonnesCO2e	KgCO2e per m2 work done	KgCO2e per tonne of asphalt material used
2021-22	429776	61910	2957	7	48
2022-23	121612	31540	1259	10	40
2023-24	114250	37744	1187	10	31
2024-25	104261	43958	1061	18	24

The current phase of the TAMP focusses on the urban unclassified network where due to the structural nature of defects and the evolved nature of many of the roads, necessitates deeper treatments, typically ≥100mm in depth which results in a greater quantity of material being used, for every m^2 treated. These deeper treatments do provide an opportunity to recycle the lower layers and should provide a longer lasting solution, thus reducing carbon footprint over the lifecycle.

Further carbon reductions are also underway through the replacement of older LED lanterns on streetlight, being replaced by more energy efficient units and LED units being installed in Traffic Signals.

Involvement in the DfT\ADEPT LiveLabs2 projects will also aid how we develop our approach to reducing the carbon impact of the highway maintenance activities.

4.0 Corporate Priorities, Alignment to the Local Transport Plan (LTP) and the Highways and Transport Strategy 2023-2025

Here at Lancashire County Council, we are helping to make Lancashire the best place to live, work, visit and prosper and has recently set new Corporate Priorities. This Transport Asset Management Plan delivers on these ambitions by setting out our commitment from highway maintenance.

Corporate Priority	Transport Asset Management Plan approach will
Delivering better services	by considering the lifecycle of the asset, will ensure sustainability through durability and that best value and least disruption is delivered for everyone.
Caring for the vulnerable	ensure all decisions are based on assessment of asset condition and strategic importance and are therefore equitable.
Protecting our environment	ensure use of recycled materials is considered where appropriate that that carbon is considered in all decisions and were possible schemes and activities have low carbon impact.
Supporting economic growth	ensure the transport network allows the smooth movement of people, goods and services

Maintaining and managing our highway assets is one of the 7 Priorities and Activities in the current Local Transport Plan (LTP). The LTP states the objective is to "sustain and improve the condition of footways, cycleways, highways and structures so that maintenance can be carried out in a planned rather than a reactive manner" which aligns with the Transport Asset Management approach of moving away from the worst first approach and adopting the approach of preventative maintenance based on the condition of the assets and application of lifecycle planning principles.

Work is progressing on a joint Local Transport Plan (LTP4) to cover Lancashire, Blackburn with Darwen and Blackpool Councils which will reflect latest government and TFN policy guidance and draw on evidence emerging from the Lancashire 2050 Strategic Framework, and importantly focus on decarbonisation and levelling up priorities. The councils are working towards initial public engagement in late 2023 with publication of a new LTP4 strategy in 2024. The 2022 Transport Asset Management Plan Refresh will take on board emerging evidence and draft policy in order to align the two plans.

In January 2023 Cabinet approved the Lancashire County Council's Highways and Transport Strategy 2023-2025. This Strategy presents a high-level view of how we will deliver our highways and transport responsibilities over these three years to deliver to our corporate priorities. This Strategy provides a single point of reference for the council's activities envisaged in the period to 2025. Highway Asset Management is one of the four core priorities and has the following objectives which set the framework for our activities in this period:

Highways asset management:

- Manage our highways assets efficiently and effectively to support connectivity to employment and to essential services.
- Build our understanding of the condition of all our highways assets to focus our maintenance activity and leverage investment.
- Reduce the carbon footprint of our highway's maintenance activities.

To achieve these objectives and our vision for our management of the highways asset in 2025, the Strategy sets out the following three priority projects, to:

- Focus on risk-based investment and preventative and preservative treatments.
- Build our understanding of the condition of our assets.
- Develop ways to reduce the carbon (CO_2 e) generation from our activities towards net zero.

5.0 Department for Transport (DfT) funding and self-assessment

In order to encourage local authorities to adopt better asset management policies, strategies and lifecycle planning the DfT introduced changes to the highway maintenance formula funding mechanism.

From 2015/16 each authority was required to undertake a self-assessment against a set of criteria aimed at assessing performance in relation to asset management, resilience, customer, benchmarking and efficiency and operational delivery.
In the first assessment, submitted in January 2016, we considered ourselves to be band 2 authority.

As a result of continued progress in 201/17 and onwards, we have considered ourselves to be a band 3 authority which has enabled us to attract 100% of the Incentive funding element. Band 2 authorities are currently only receiving 30% of the Incentive fund.

Our commitments to in the Highways Decarbonisation Strategy relating to understanding the carbon impact of maintenance decisions within the lifecycle of the asset will help us align to anticipated changes with the self-assessment.

Cabinet approved the 2024/25 Highway Block of the Capital Programme in March 2024 which included the indicative Department for Transport highway maintenance grant funding of £28.811m and £3.661m additional funds for 2024/25 announced by the Government in October 2023 as part of the Network North fund. An additional £5m to support highway maintenance has also been made available for priority areas for 24/25.

6.0 Performance Management Information

When the TAMP was introduced in 2014, our emphasis shifted to the implementation of early intervention, preventative maintenance strategies. We believed this would enable us to make more efficient use of our resources. The emphasis was placed on collecting condition data for the various highway asset groups to inform investment decisions and to report progress.

The condition of the main asset groups as March 2024 is reported further in this document. Additionally, other Key Performance Indicators (KPIs) are collected and reported regularly to the Cabinet and the management teams to measure the health of the highway service. Below is a summary of those KPIs.

Highway Safety Inspections

Possibly the most important aspect of this is identifying defects at the earliest stage possible, in order that repairs can be carried out proactively to stop the asset from deteriorating further, which may then lead to more expensive repairs being required further down the line or increase the risk of injury, damage and third part claims.

We aim to maintain all aspects of our highway network with specified timescales as set out in our Highway Safety Inspection Policy which can be accessed here.

During inspections, our Highway Safety Inspectors look for a range of defects affecting the carriageway, footway, streetlights, signs, bollards and trees.

Highway Safety Inspections			
Year	**Number of Inspections**	**Number completed on time**	**% on Time (Target 90%)**
2023/24	33636	29710	88.88£
2022/23	33,332	32,545	97.64%
2021/22	33,436	30,016	89.77%
2020/21	34,843	33,286	95.53%
2019/20	34,834	28,337	81.35%
2018/19	35,788	26,142	73.05%
2017/18	34,567	30,473	88.16%

The increase in the number of defects has had a knock-on effect on the number of inspections completed on time.

Highway Safety Defect Repairs

Once a defect has been found by our Highway Safety Inspectors, or has been reported by members of the public, it is important that these are fixed within the timescales specified in the Highway Safety Inspection Policy.

All Safety Defects by Financial Year							
Year	Total Found	Emergency & Urgent (Category 1) – Target 90% fixed on time			Non-Urgent (Category 2) – Target 90% fixed on time		
		Found	Fixed on time	% Fixed on time	Found	Fixed on time	% Fixed on time
2023/24	97840	6573	4455	68%	91267	73058	80%
2022/23	72552	1,731	1,611	93%	70,821	67,113	95%
2021/22	67587	1,346	1,158	86%	66,241	59,181	89%
2020/21	58,681	1,341	1,165	87%	57,340	50,645	88%
2019/20	49,295	1,263	1,165	92%	48,032	44,614	93%
2018/19	43,848	1,335	646	48%	42,513	35,591	84%
2017/18	55,166	1,793	152	8%	53,373	35,477	67%

Category 1 defects are those that are assessed to be extremely hazardous, and require either an emergency or urgent response, because they pose an immediate danger to highway users.

Category 2 defects are those which are deemed not to represent an immediate or imminent hazard and are then further categorised according to their likely impact and risk probability.

A summary of 2023/24 highway defects is provided below: -

- 2023/24, when compared with the previous year, produced an increase in both Category 1 and Category 2 defects. Resulting in a overall increase in the number of defects reported
- The unprecedented wet weather has continued to have a major impact on highway performance. We are seeing a significant volume and backlog of inspections and defect repairs resulting in a longer than expected recovery period. Increased resources and specialised repair techniques are being deployed and risk managed accordingly.

Third Party Claims

Having an effective Highway Safety Inspection and highway defect repair regime helps us to defend ourselves against third party claims under Section 58 of the Highways Act 1980. Our successful repudiation rates with regards third party / vehicle damage claims are increasing as set out in the table below: -

Third Party Claims - Repudiation Rates		
	Personal Injury	**Vehicle Damage**
2023/24	94%	54%
2022/23	87%	67%
2021/22	85%	79%
2020/21	80%	68%
2019/20	77%	56%

The repudiation rates for Personal Injury continue to improve however, repudiation rates for Vehicle Damage have decreased again this year.

Street Lighting

During 2023/24, we have carried just over 2,449 street lighting repairs that caused the light not to work. Whilst most of those repairs can be carried out without the need for expensive traffic management, a small number cannot, and so traffic management is required to allow our staff to work safely.

Where traffic management is not required, we aim to fix 95% of faults require within 5 working days. Where traffic management is required, we aim to fix 95% of faults within 20 working days. The results for both category of repairs is shown below: -

	Non-Traffic Management Repairs: Target 95%			**Traffic Management Repairs; Target 95%**		
Year	Found	Fixed	% Fixed on time	Found	Fixed	% Fixed on time
2023/24	2138	2127	99%	311	304	98%
2022/23	1847	1839	100%	286	286	100%
2021/22	2417	2368	98%	409	389	95%
2020/21	3006	2742	91%	209	185	89%

7.0 Customer Feedback

Since 2015, Lancashire County Council has taken part in the annual National Highways & Transport Network (NHT) survey which collects the public's views on different aspects of highway and transport assets / services in local authority areas.

For 2023, the survey was sent to 4,800 households across the authority area and 1,176 responses were received, which represents an overall response rate of 24.5.% which is better than the national average (22.8%).

Summary of Key Benchmarking Indicators (KBI) NHT Satisfaction Indicators 2023-24

		2023		2022		
Ref	**Key Benchmarking Indicator**	**LCC result**	**NHT Average**	**LCC result**	**NHT Average**	**Trend**
KBI23	Condition of Highways	20%	27%	28%	34%	static compared to mean
KBI25	Street Lighting	60%	61%	62%	62%	Static
KBI24	Highway Maintenance	39%	43%	44%	46%	Static
KBI26	Highway enforcement\ Obstructions	38%	40%	41%	42%	Static

Many of our indicators perform well:

Ref	Indicator	Result 2023	NHT Average	Result 2022	NHT Average
HMQI13	Provision of Streetlights	77%	78%	79%	78%
HMBI06	Speed of repair to streetlights	52%	53%	53%	54%
HMBI28	Undertakes cold weather gritting	49%	56%	57%	58%

We closely monitor those with the lowest satisfaction scores:

Ref	Indicator	Result 2023	NHT Average	Result 2022	NHT Average
HMBI30	Speed of repair to damaged roads	18%	22%	24%	28%
HMBI01	Condition of road surfaces	19%	25%	26%	32%
HMBI13	Deals with potholes\ damaged roads	20%	26%	26%	32%
HMBI31	Quality of repair to damaged roads	22%	28%	27%	34%
HMQI11	Number of potholes	11%	14%	16%	22%

We also take part in the On-Line Highway Maintenance Themed Survey to obtain a broader view of opinion. Whilst percentage scores from the paper survey were overwhelmingly more positive than those received from the online survey, the 'pattern' of results is similar.

Condition of Road Surfaces, Quality of Repair to Damaged Roads and Speed of Repair to Damaged Roads continues to be of highest importance to a large percentage of the residents of Lancashire County and is also what is considered to have deteriorated the most.

You Said, We Did

As a result of the feedback received, the county council works hard to provide enhancements and improvements to our processes e.g. the way we fix potholes, and strives to introduce improvements to the way we communicate with our residents around planned carriageway and footway repairs to address some of the concerns raised. This includes designated webpages explaining various aspects of our approach to carriageway and footway maintenance, which can be found here.

We have also introduced a 'You Said, We Did' initiative to provide updates on what action we're taking to tackle some of the issues highlighted by the feedback.

You said...	What we've done / are doing...	Desired Result
Improve communications (to impacted homeowners) both prior to, and during, scheduled works	Increasing use of metal road signs, providing intended works information, as opposed to the current streetlight signs	Improving visibility for those travelling around our county
	Embracing the use of new technology e.g. QR Codes	Improving direct access to information already online
	Improving the provision / consistency of letters and / or postcards which are provided to impacted homeowners	Improving communication to those residents directly affected by our work
	Create new letters / postcards which will provide additional information on works where time will elapse between treatments e.g. we'll be back	Improving communication to those residents directly affected by our work
You said...	**What we've done / are doing...**	**Desired Result**
Provide additional information to local councils to improve visibility of upcoming works	Implement a comms channel with local / parish councils to confirm upcoming works	Improving the stream of information provided to customer facing personnel to help reduce the number of queries received. And to facilitate self-service.
You said...	**What we've done / are doing...**	**Desired Result**
Why one road is resurfaced (fixed) versus another?	Development / Provision of an online scheme dashboard	Improving the visibility of scheduled works and what work is being done
	Development of information videos to ensure new technological information is accessible to all	Improving information and background as to why we do, what we do
You said...	**What we've done / are doing...**	**Desired Result**
Poor communications in relation to highways maintenance, and also in relation to our aim to reduce our carbon footprint	Creating byte-sized campaigns to highlight the process of prioritisation of highway maintenance, and embracing new low carbon / recycling schemes e.g. biobinders	Challenge negative perceptions by improving communications to residents on the work being done to improve our highways and to reduce our carbon footprint

8.0 Revised Asset Condition Data

Since the TAMP was first introduced in 2014 much work has gone into collecting and updating asset condition data and procedures have now been put in place whereby, we are able to collect and refresh this data at intervals that are considered appropriate.

The following pages provide an overview of the condition of each of the asset groups covered by the TAMP together with a summary of the main points arising out of our analysis of each group. A full explanation of the service Standards can be found in the TAMP Phase 2 document which can be found here

Each section follows a similar basic structure. Where possible graphs will show simultaneously the condition as at the end of Phase 1\ start of Phase 2 and the current condition as of March 2024 (end of Year 4 Phase 2). Where possible this will be broken down on a district-by-district basis.

A summary provides key bullet points which seek to outline briefly the key facts relating to the category of the asset.

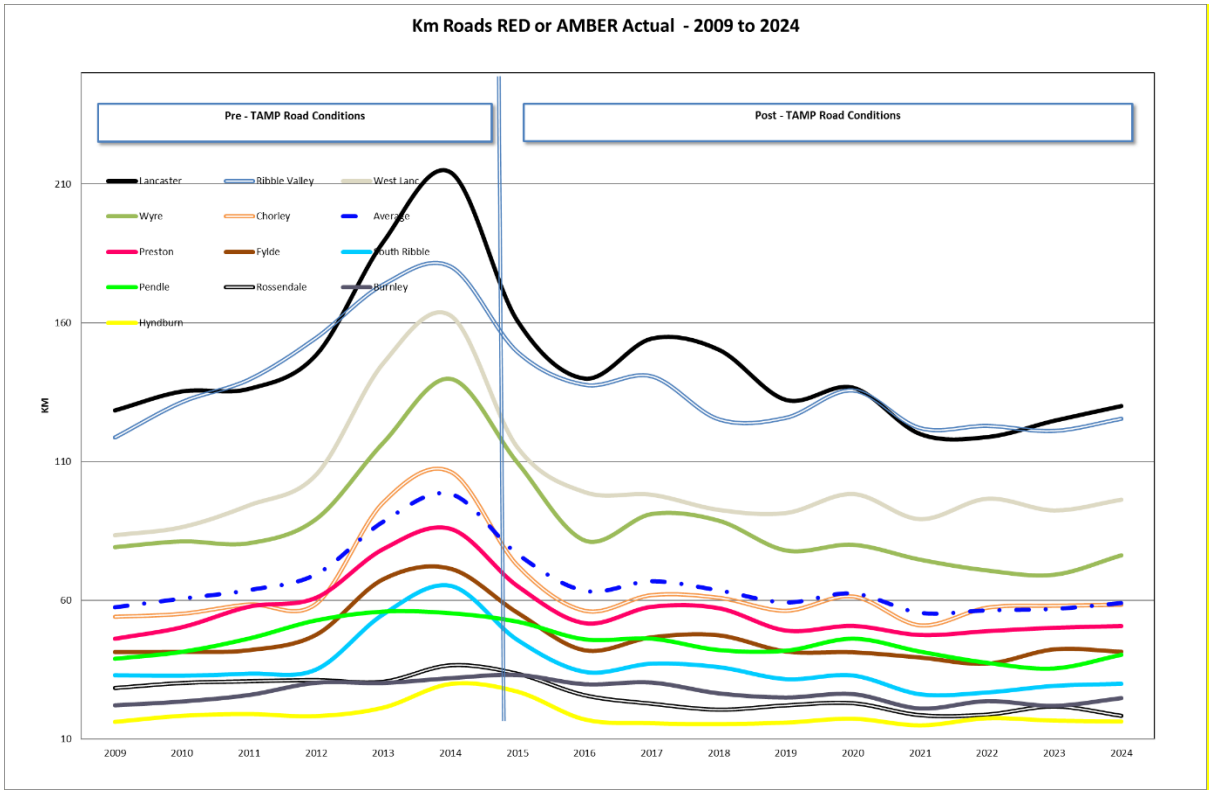
8.1 A, B and C Roads

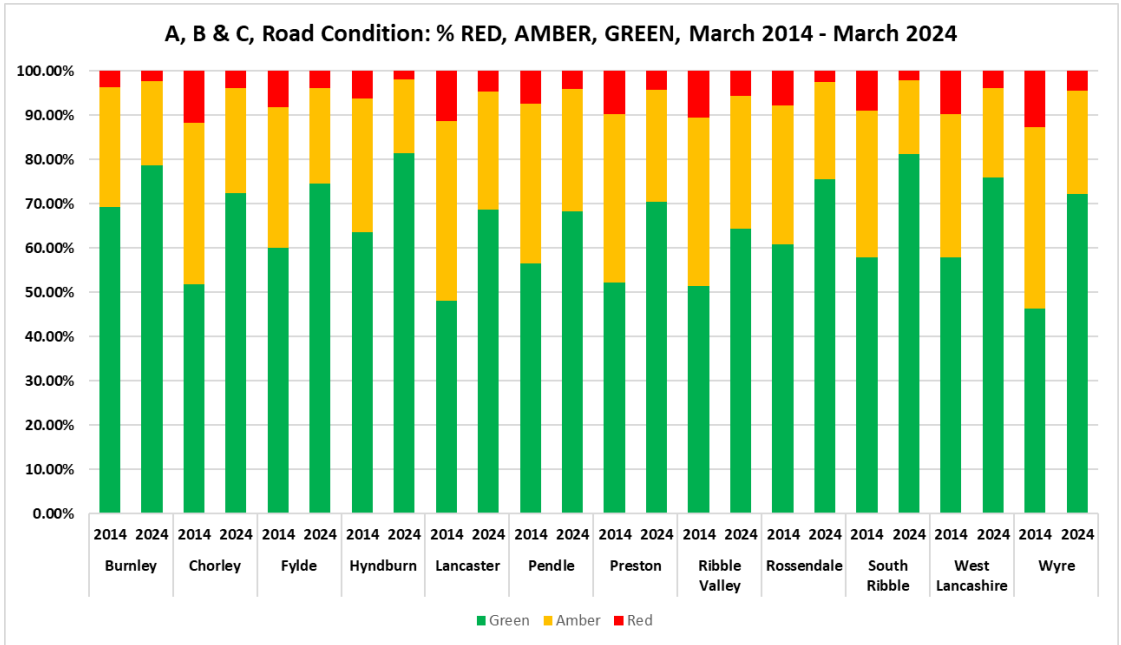
Most Cost-Effective Strategy: Investment in preventative maintenance using appropriate surface treatments determined through deterioration modelling.

Approach TAMP Phase 2 and Phase 3: Maintain the network at the current level through preventive and preservative treatments and structural maintenance prioritised on condition and strategic importance. As described below in " **Capital Programme Prioritisation"** (section 9.6)

Asset Condition

Asset Category	Condition Measure	Base Date April 2020	End of Year 1 2020/21	End of Year 2 2021/22	End of Year 3 2022/23	End of Year 4 2023/24	Target Year5 2024/25
Carriageways							
A Roads	% RED	2.10%	1.43%	2.20%	2.10%	3%	2.88% - 2.01%
	% AMBER	20.47%	16.80%	19.90%	16.40%	22.50%	25.06% - 20.47%
B Roads	% RED	3.09%	2.70%	2.90%	3.30%	3.90%	3.73 - 2.19%
	% AMBER	21.10%	20.55%	21.40%	21.90%	23.60%	29.13% – 22.73%
C Roads	% RED	5.23%	4.15%	4.20%	5.20%	6.30%	6.02% - 5.1%
	% AMBER	28.87%	26.46%	26.30%	26.50%	30%	32.78% - 28.87%





- The A, B, C road network is measured using SCANNER; the results show a slight rise from last year reflecting the wet winter experienced during 2023/24; however, the condition of the network is better than the Pre- Transport Asset Management Plan period.
- The Urban and Rural Unclassified Road network condition remains relatively static. As does that for footways.

8.2 Unclassified Roads

The asset includes approximately 3,440 km of residential roads and 980 rural. The rural unclassified and urban unclassified road networks are the main focus of our attention in Phase 2 of the TAMP.

New service standards for our Residential Unclassified and Rural Unclassified roads and the footway network where presented to the September 2021 meeting of the Cabinet for approval. These are based Detailed Video Survey. Currently for which no national standards currently exist.

The Department for Transport (DfT) have however started a consultation exercise and it is expected that advice will be available before the end of the current TAMP Phase 2.

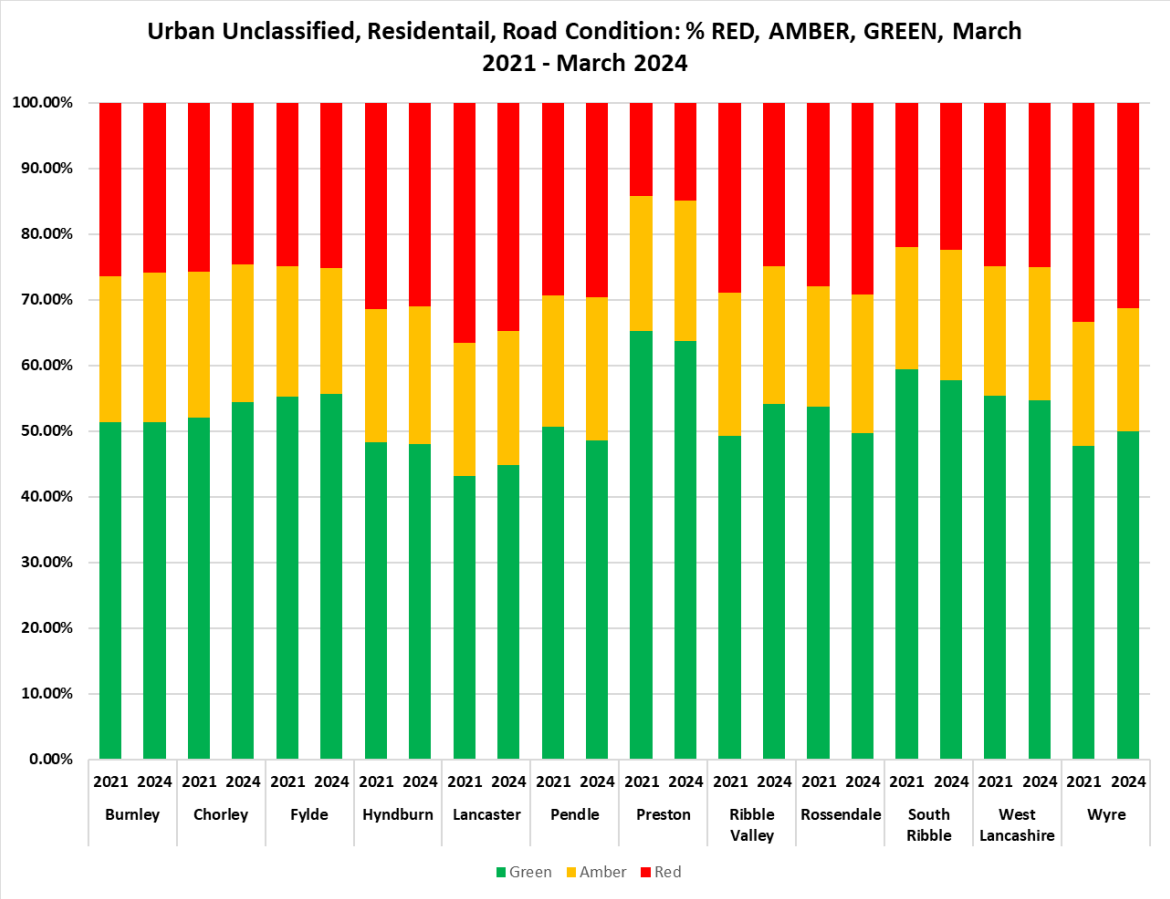
Therefore, the condition metrics are provisional and will be updated the outcome of the consultation exercise is known.

Asset Category	Condition Measure	Base Date April 2020	End of Year 1 2020/21	End of Year 2 2021/22	End of Year 3 2022/23	End of Year 4 2023/24	Target Year5 2024/25
Carriageways and Footways							
Residential Unclassified	% RED	N/a	26.74%	26.83%	26.76%	26.32%	Not Set
	% AMBER	N/a	20.16%	20.29%	20.40%	20.63%	Not Set
Rural Unclassified	% RED	N/a	25.28%	30.30%	32.56%	32.03%	Not Set
	% AMBER	N/a	22.33%	20.00%	21.63%	21.88%	Not Set

8.3 Urban Unclassified

Most Cost Effective Strategy: Investment in preventative maintenance which is based on appropriate surface treatment in preference to more costly resurfacing of roads.

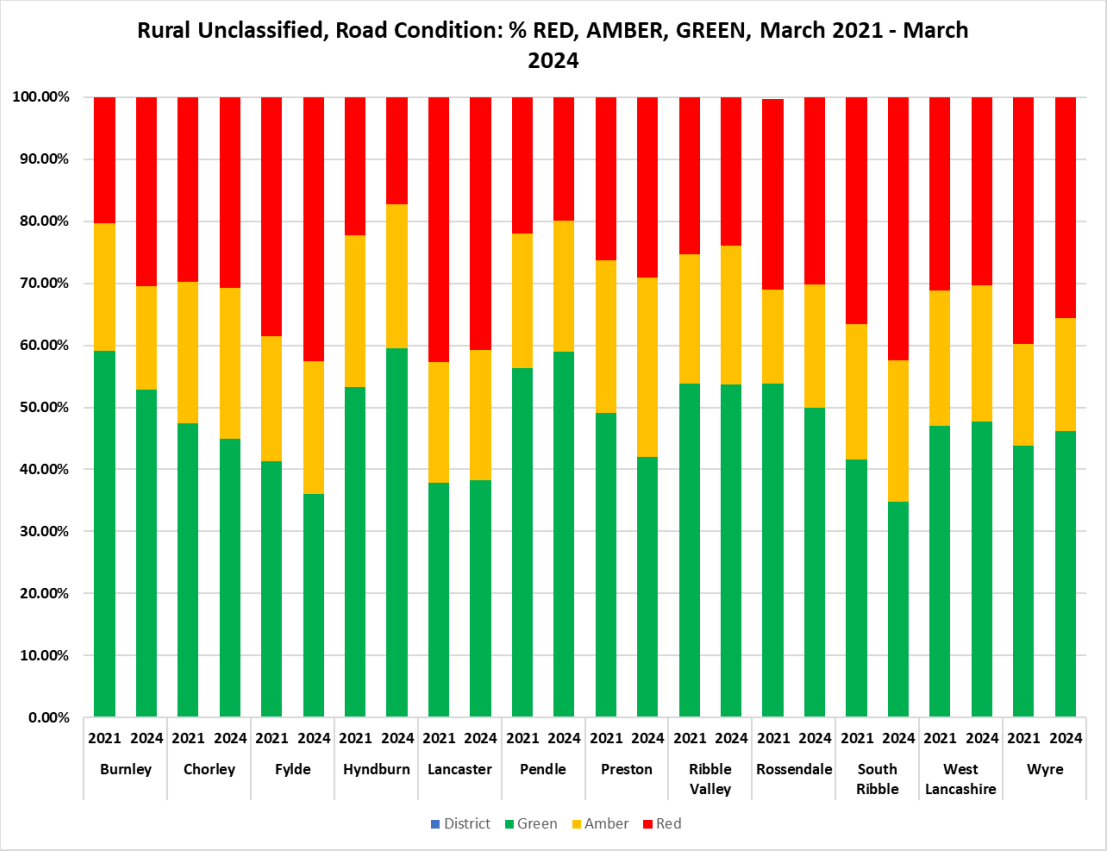
Approach TAMP Phase 2 and Phase 3: Arrest the accelerating decline of the urban unclassified 'residential' network through structural capital schemes, focusing on recycling where possible, for those roads showing 90%-100% structurally impaired and repeat visits to Structural Defects (Potholes), and through the use of the Localised Deterioration Fund to reduce structural defect repeat visits and address local and Member concerns. Strategically important routes showing moderate to high structural impairment will also be prioritised. We are also focusing on addressing small areas of deterioration identified through repeat visit to fix potholes and signs of pothole damage and deterioration through the video surveys. These areas are being addressed through the Localised Deterioration Fund that consider schemes up to 2000m^2. In addition, there is also a focus on preventative patching of approximately 25m^2 to address smaller areas of deterioration.



8.4 Rural Unclassified Roads

Most Cost-Effective Strategy: Investment in preventative maintenance which is based on appropriate surface treatment in preference to more costly resurfacing of roads.

Approach TAMP Phase 2 and Phase 3: Maintain the network condition through the use of jet patching to find and fix defects and preserve condition. Structural capital schemes, focusing on recycling where possible, for the worst areas and preventative treatments on the most strategic routes where appropriate.



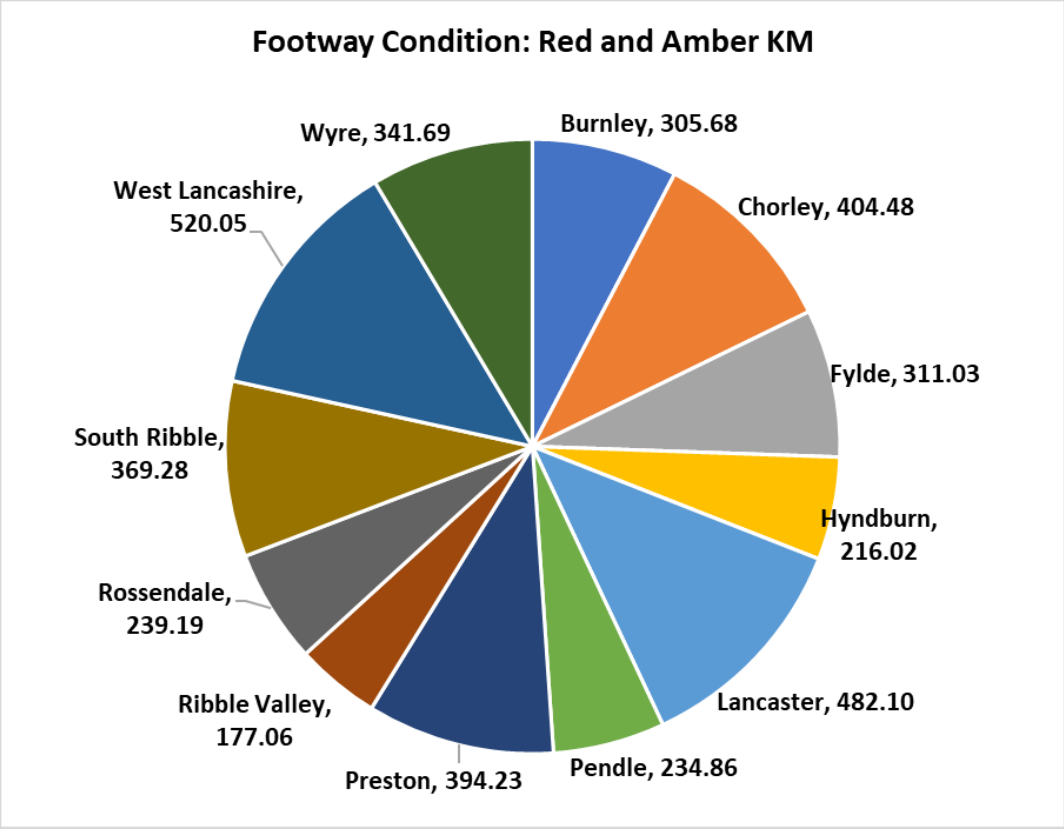
8.5 Footways and Cycleways

Total length of footways is around 7000km.

Most Cost-Effective Strategy: Investment in preventative maintenance which is based on appropriate surface treatment in preference to more costly resurfacing of footways.

Approach TAMP Phase 2 and Phase 3: With available funds focus on the areas of worst condition with greatest footfall for vulnerable users, such as around schools, hospitals. Consideration to be given to areas of high deprivation. Predominantly use of recycled materials.

Asset Category	Condition Measure	Base Date April 2020	End of Year 1 2020/21	End of Year 2 2021/22	End of Year 3 2022/23	End of Year 4 2023/24	Target Year5 2024/25
Footways							
Footways	% RED	N/a	11%	12%	13%	14%	Not Set
	% AMBER	N/a	39%	40%	41%	40%	Not Set



8.6 Capital Programme Prioritisation

Condition Data

Each year a video survey of all of Lancashire's highways is used to assess the condition of all A, B and C classified roads, and every other year for unclassified (residential) and unclassified rural roads.

Once the condition survey is undertaken a scheme identifier toolkit is applied to generate indicative scheme proposals, this also includes schemes proposed from stakeholders such as County Councillors, Customer complaints and officers.

Two different scheme types are generated depending on condition,

- resurfacing or
- preventative i.e. surface dressing

The resurfacing programme focus on areas of predominately grade 4 and 5 defects, i.e. structural damage and failure of the carriageway and weights theses grade of condition over all others.

The surface dressing programme focuses on areas of condition grade 3 as general these are the area's most suitable and in the most need of preventative surface dressing work, to delay deterioration into grade 4 and 5.

Defect Data

Highway Safety defects, general carriageway defects such as those reported and defects and complaints from the public, are applied to the scheme areas to understand where repeated unplanned repairs and defect reports are being made.

Strategic Importance

The importance of a Highway within any proposed scheme is determined by numerous strategic factors and associated perceived risks for the whole or the majority of its extent. These include bus routes, presence of schools or emergency services and the resilient route network.

A, B and C classified Roads

- Higher weighting is applied to network significance and less on factors such as number of properties as the purpose of ABC roads is the movement of vehicles over strategic distances.
- An additional weighting multiplying is added to the class of roads that are deteriorating at the fastest rate from the previous year's SCANNER survey which directly influences DfT Road Condition Indicator scoring mechanism for the authority.
- Index of deprivation is not used on ABC roads because classified roads by their nature span multiple areas and their importance goes beyond the immediate extent of the scheme.

Urban Unclassified Roads

- Has a balanced approach applying weighting to number of potholes, carriageway condition reports and applies a double weighting to the number of residential and mixed-use properties, with the aim of focusing on densely populated areas where schemes will have maximum benefit.
- Index of deprivation – helps provide a balance to the prioritisation in areas where the submission of public reported defects is less prevalent.
- Strategic importance of the route is also considered.

Rural Unclassified Roads

- Higher weighting is applied to secondary gritting routes to focus in on where rural settlement hubs are located
- Higher weighting is applied to number of residential properties to account for lower population density in rural areas.
- Higher weighting applied to bus routes (inc. school bus routes), to ensure resilience of public transport routes between rural settlements and employment and educational areas.

Footways

- Higher weighting is applied to residential areas, retail, leisure, community and health addresses, this includes but is not limited to; schools, shops, assisted living residences, tourism sites, community centres and police stations. Areas that have the highest footfall and will achieve the maximum benefit.

- Additional weighting is applied to those areas with the highest footfall including bus stops, school bus routes and gritting routes. This is to ensure people in Lancashire can live, work, visit and prosper.
- Index of deprivation – helps provide a balance to the prioritisation in areas where the submission of public reported defects is less prevalent.

Summary

- Yearly condition survey providing 100% coverage of ABC and 50% coverage of unclassified roads.
- 2-year history of defect data assessed against condition data
- Strategic importance and risk factors of network considered.
- Programme specific weightings to tailor each programme.
- Focuses on large areas to provide best value and impact.
- All schemes are confirmed and validated by local engineers.
- The data driven approach is transparent and accountable and underpins the selection of schemes across the County.

Local Deterioration Fund (LDF)

The Local Deterioration Fund was created as a gap that was identified between what repairs were achievable within current revenue budget constraints and what is perceived to be a capital maintenance scheme. Therefore, a process was put in place to ensure the schemes that fell between these two operations could be funded but still prioritised. LDF schemes are generally less 2000m^2, which is typically no more than a single day of machine laid resurfacing.
The LDF generally assesses and commissions scheme three times year. This allows a flexible programme to be developed that can better deal with roads that have deteriorated quickly to be resurfaced within year.

The prioritisation of LDF schemes differs from the capital programme in that the strategic importance of the highway is not considered. The schemes address small areas of deterioration identified through repeat visit to fix potholes and signs of pothole damage and deterioration through the video surveys. This ensures that areas that are costing the most money to maintain are treated as a priority, thereby reducing the stress on revenue budgets, and keeping those areas safe.

Summary

- The programme is assessed, and schemes identified and commissioned three times per year. Each assessment uses up to date data.
- This provides a flexible approach to deal within year deterioration of the carriageway.
- The prioritisation method uses number of repeated maintenance visits and signs of pothole damage and deterioration through the video surveys as the main factors.
- Helps to smooth out seasonal programme demands on highways operations teams.
- Provides high quality, durable capital works standard carriageway repairs to areas of repeated revenue spend.
- Reduces revenue spend

- The data driven approach is transparent and justifies spend on smaller areas which require treatment across the County.

8.7 Bridges and Similar Structures

Most Cost-Effective Strategy: Investment in preventative maintenance which is not based on reconstruction of bridges but on intervention at the appropriate time.

Approach TAMP Phase 2 and Phase 3:

- Identify appropriate preventative maintenance to prevent further deterioration.
- Continued investment in the understanding high risk structures such as scour susceptible, post-tensioned, and half-joint, and deliver appropriate interventions before issues arise.
- Identifying high risk bridges producing management plans for each.
- Identifying those assets for replacement or large investment that fall outside of proposed capital allocations.
- Increased lifecycle planning using the Structures Asset Valuation Investment (SAVI) Toolkit to understand the asset condition better and prepare a work bank for Phase 3 of the TAMP.

Bridge Condition Scores

Tables BT1 below shows the breakdown of the Bridge Stock Condition Indicator by Maintenance Strategy.

			Bridge Stock Condition Indicator CRIT				
Maintenance Category	**Total % Deck Area**	**No. of Bridges**	**Mar - 20**	**Mar - 21**	**Mar - 22**	**Mar - 23**	**Mar-24**
Planned Targeted	69%	568	78.89	78.67	78.71	79.22	78.32
Planned Preventative	21%	665	80.59	80.47	80.7	80.53	79.09
Planned Do Minimum	10%	599	83.01	82.19	81.42	81.61	81.37
Grand Total	**100%**	**1832**	**80.76**	**80.45**	**80.32**	**80.47**	**TBC**

Bridges Table 1 (BT1) – Bridge Stock Condition Indicator CRIT by Maintenance Category

Summary

- The funding level for Phases 1 and 2 of the TAMP was set at a level that should see a steady decline in the condition of the stock and this is being confirmed within the condition figures.
- The condition of the bridge stock has remained steady over the TAMP Phase 2 cycle but has noticeable dropped in 2023/24
- The condition of our Planned Targeted and Planned Preventative bridges, which are located on strategic and priority routes and account for 80% of all bridge deck area, is considered to be Fair.
- The condition of our Planned Do Minimum bridges, which account for just 10% of bridge deck area
- The data shows that the overall bridge stock is in Fair condition.

Limitations of the BCIcrit

The BCIcrit and BCIav can sometimes hide issues within the bridge stock. We inspect bridges at element level and this data is used more to inform decisions regarding Capital works than the BCIav or BCIcrit. The Element Importance Classification reflects the importance of an element to the overall structure in terms of:

- Load carrying capacity.
- Durability, and
- Public safety

Depending on the function performed by an element and its importance to the overall functioning of the structure, the importance of an element is designated as Very High, High, Medium or Low. Elements are scored on a range of 1A to 5E, 1A being excellent condition and 5E being failed. When an element score reaches 3C or worse it is considered for works in accordance with the Bridges and Structures Lifecycle Plan.

Table BT2 shows No. of bridges with individual element scores lower than 3C.

			No. of Bridges with an Element Scoring 3C or Worse (only highest importance element is counted).									
Maintenance Category	**Total % Deck Area**	**No. of Bridges**	**Very High**		**High**		**Medium**		**Low**		**None**	
			Mar 23	Mar 24	Mar 23	Mar 24	Mar 23	Mar 24	Mar 23	Mar 24	Mar 23	Mar 24
Planned Targeted	69%	573	115	129	180	168	131	138	18	21	124	117
Planned Preventative	21%	660	133	146	152	133	188	211	19	18	173	152
Planned Do Minimum	10%	597	108	107	118	121	144	150	28	28	201	191
Total	**100%**	**1830**	**356**	**382**	**450**	**422**	**463**	**499**	**65**	**67**	**498**	**460**

Bridges Table2 (BT2) – No. of bridges with individual element scores lower than 3C

Summary

- The data shows that we have a slightly reduced number of bridge with a condition score of 3C or worse
- However the number of bridges with Very High, structurally important elements of the bridge scoring 3C or worse has increased
- Due to the backlog of works it is not possible at the moment to implement the preferred maintenance strategy of intervention at the most cost effective time.
- The backlog of works is increasing. The lifecycle planning using SAVI shows that it will continue to increase despite the increase in funding levels proposed for TAMP Phase 3.
- The Bridges asset group will be the focus of attention in Phase 3 of the TAMP. During Phase 2 we are looking to maintain the condition of this asset group as close to their April 2020 condition as possible.
- Implementing management plans for high-risk structures such as scour susceptible, post-tension and half-joint should allow for improved understanding of their deterioration and improve intervention efficiency.

8.8 Retaining Walls

Most Cost-Effective Strategy: Investment in preventative maintenance which is not based on reconstruction of retaining walls but on intervention at the appropriate time.

Approach TAMP Phase 2 and Phase 3:

- Identify appropriate preventative maintenance to prevent further deterioration.
- Identifying high risk structures producing management plans for each.
- Identifying those assets for replacement or large investment that fall outside of proposed capital allocations.

Summary

- We have not yet set a formal service standard for this asset type, they are considered to be in a FAIR condition.
- The data in the 3 tables below shows that the that the overall condition of the retaining wall stock is deteriorating following a small improvement since 2021 following the additional £4m funding from the DfT Challenge. Fund.

Owner	Lancashire CC				
No. of Walls	804				
Length of Walls	70km				
Maintenance Category	**Average of CRIT***				
	2020	2021	2022	2023	**2024**
Planned Targeted	74.99	75.74	75.19	76.11	70.92
Planned Preventative	74.20	73.11	70.42	71.96	66.23
Planned Do Minimum	77.76	78.21	76.04	77.69	72.94
Total	**75.07**	**74.98**	**73.19**	**74.51**	**69.14**

Owner	Unknown Ownership				
No. of Walls	598				
Length of Walls	53km				
Maintenance Category	**Average of CRIT***				
	2020	2021	2022	2023	**2024**
Planned Targeted	69.18	69.85	69.00	70.16	67.02
Planned Preventative	65.89	66.4	66.09	67.80	63.02
Planned Do Minimum	68.33	68.22	70.61	71.76	69.57
Total	**67.23**	**67.68**	**67.64**	**69.10**	**65.15**

Owner	Combined				
No. of Walls	1402				
Length of Walls	123km				
Maintenance Category	**Average of CRIT***				
	2020	2021	2022	2023	**2024**
Planned Targeted	72.8	73.58	72.91	73.95	69.54
Planned Preventative	69.97	69.78	68.30	69.92	64.68
Planned Do Minimum	73.32	73.32	73.74	75.19	71.56
Total	**71.49**	**71.74**	**70.76**	**72.16**	**67.43**

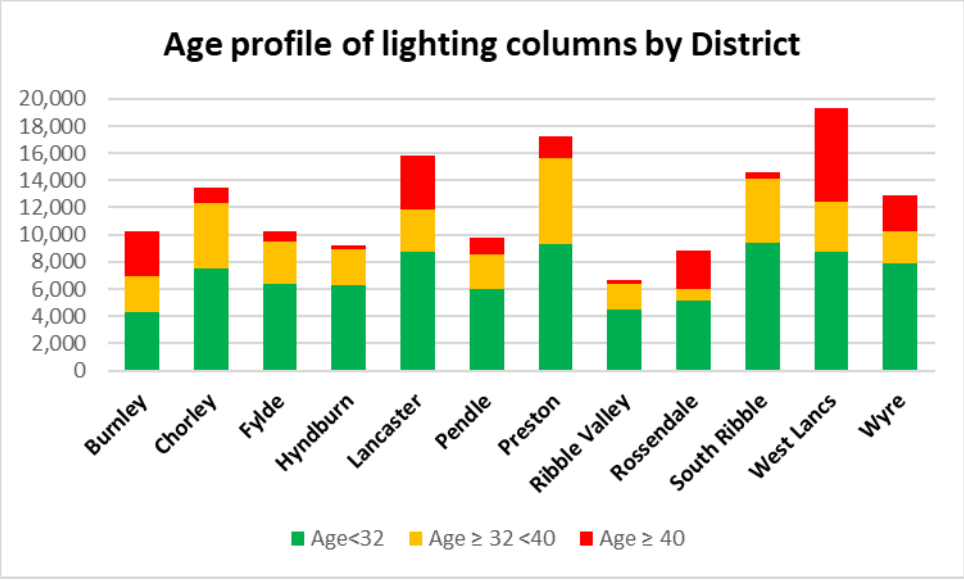
8.9 Street Lighting

Most Cost-Effective Strategy: Planned column replacement programme

Approach TAMP Phase 2 and Phase 3: Increased investment in planned column replacement with continued risk-based approach to test the most vulnerable assets and replace or retest as required.

We are responsible for approximately 176,000 streetlights and 23,600 illuminated signs, bollards, and similar installations.
The number Street Lighting columns over 40 years old have shown an improvement on last year due to the increase in investment. At the end of March 2024, we had 25,434 lighting columns that were aged 40 years or older.
The current condition of the stock is considered to be POOR and is expected to deteriorate further year on year. To address this funding for street lighting column replacement has increased from previous years for column replacement and testing, focusing on the most vulnerable columns.

	Asset Condition: No Columns ≥40 years old				
Base Date April 2020	End of Year 1 2020/21	End of Year 2 2021/22	End of Year 3 2022/23	End of Year 4 2023/24	Target Year5 2024/25
13,643	14,544	25,214	26,427	25,434	<16,000



8.10 Traffic Signals

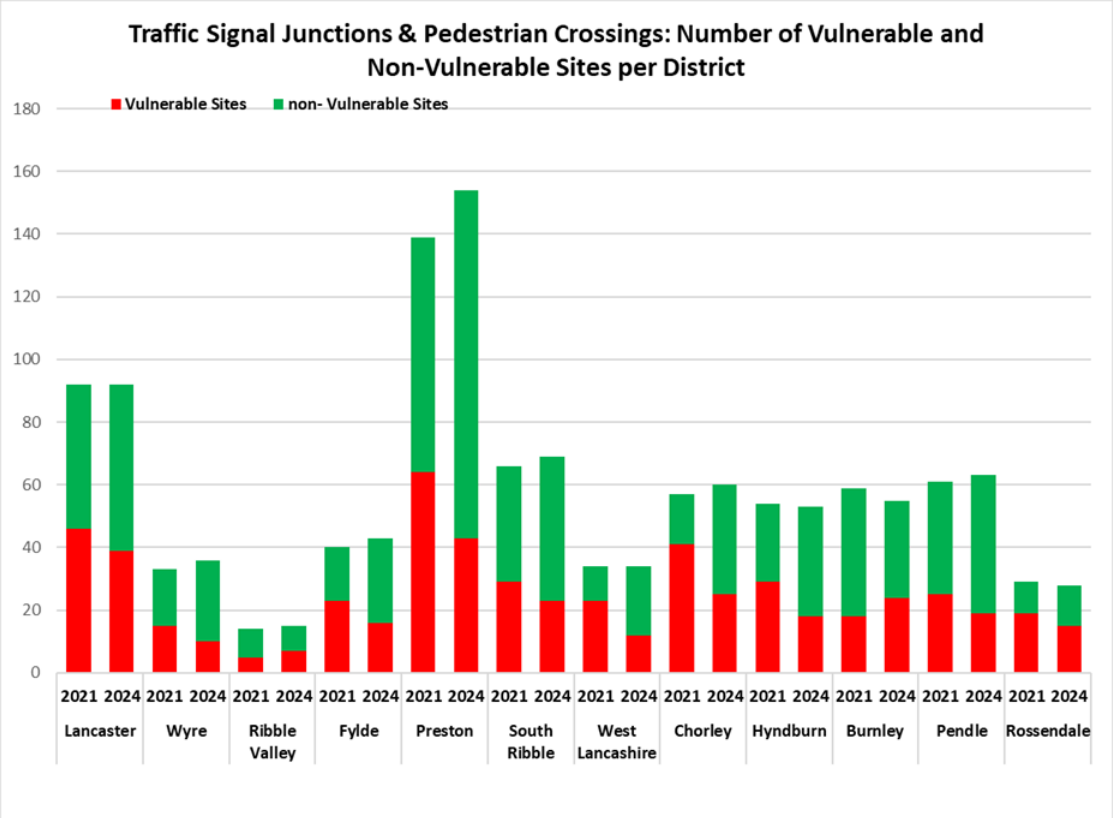
Most Cost-Effective Strategy: Investment in preventative maintenance which is based on replacement of obsolete units at key junctions which will not be covered by Highways and Transport Masterplan activities**.**

Approach TAMP Phase 2 and Phase 3: as above.

There are 702 traffic signal installations in Lancashire.
The condition of the stock is measured in terms of the vulnerable sites, which refers to installations that are older than their 20-year design life and additionally have obsolete controllers age both of which are no longer supported by the manufacturer. We currently have a total of 251 installations as end March '24 which are classed as vulnerable.

Traffic Signals have shown a dramatic improvement with a reduction in the number of obsolete sites. This is due to a revised approach in only replacing the essential redundant equipment rather than whole site replacement. The Asset review carried out in 2022/2023 has provided a detailed / accurate report of the current assets.

	Asset Condition: No. of obsolete and vulnerable sites				
Base Date April 2020	**End of Year 1 2020/21**	**End of Year 2 2021/22**	**End of Year 3 2022/23**	**End of Year 4 2023/24**	**Target Year5 2024/25**
N/a*	337	395	346	251	<289



The LED retrofit trial has provided a good insight into this style of replacement exercise. The team gained a greater understanding of the cost and associated timescales which in turn informed our Traffic Signals Obsolescence Grant bid.

We received a £234k allocation from the DFT and are currently scoping the works with the aim of delivering the construction works in the first quarter of FY 25/26. The programme will see the replacement obsolete controllers and MOVA Units as well as a LED Retro Fit at a minimum of 7 traffic signal junctions. Should the first seven sites be delivered within budget a further 4 sites will be considered.

8.11 Vehicle Restraint Systems

Summary

- Lancashire has 1444 VRS sites with a total length of 129,007m recorded on the Asset Register. At present an Asset Valuation is not possible due to insufficient data on many of these sites.
- Prior to 2021 no inspection or testing was being undertaken on the VRS. All the VRS sites are ranked using a risk based approach using the importance of the VRS and also condition scoring.
- Expenditure on VRS is currently around £450k per year.
- Since 2021 £1.1m of inspection, testing and maintenance works have been undertaken on 142 of the Very High and High Risk VRS sites.
- It is expected that by the end of 2025/26 all the Very High and High risk works identified in the original project will have been brought back up to acceptable condition.
- At that point we intend to reduce expenditure to £300k per year and concentrate on inspection and testing with timely intervention rather allowing the large backlog of works to build up again

Road Classification	No. of VRS	Length of VRS (m)
Motorway*	78	21,836
A	665	79,592
B	151	7,937
C	299	10,810
Unclassified	239	8,591
X	7	106
Totals	**1444**	**129,007**

VRS Table 1 – Breakdown of VRS

The A6070, formally A601(M), has been included as part of the A road network.

		Inspection or Works		
VRS Risk Rating	**Total no. VRS**	**Completed 23/24**	**Programmed for 24/25**	**Outstanding**
Very High	126	87	20	19
High	394	55	43	296

VRS Table 2 – Inspection and Works to date

8.12 Cattle Grids

Lancashire has 87 Highway Cattle Grids recorded on the Asset Register.

It was identified in 2023 that there were a high number of cattle grids in a poor state of repair. Further investigation of this issue highlighted that because cattle grids are more structures than highways maintenance issues, apart from safety defects, were not being picked up by the HSIs. A desk based exercise was undertaken to populate the asset register with Cattle Grid locations and further asset data was then collected by Highways Operations.

A new Code of Practice (not yet published) was produced which included a new inspection system. All cattle grids are now subject to an inspection by the Bridge Inspectors once every 2 years. The cost of a replacement cattle is £25k and they have a design life of 25-50 years. To clear the backlog of works identified and enable roads to be kept fully open an initial 2 year budget of £100k per annum has been identified. Following clearance of the backlog a suggested level of funding year on year would be £60k, which would allow up to 2 cattle grid replacements plus some maintenance works on others to be undertaken. We should be in a position to start reporting on the full cattle grid stock condition in 2026/27.

9.0 Service Standards

The Service Standards in the TAMP are derived wherever possible from condition data collected by engineering analysis and is used to: -

- Monitor the overall condition of assets,
- Monitor our year-on-year performance, and
- Compare overall progress against the targets contained in the main TAMP document.

As more condition data becomes available for more asset groupings the performance targets will be updated as appropriate and will be included in a future TAMP refresh documents.

Where it is necessary to change service standard, we will clearly explain why such changes are required and obtain the necessary Member approval.

The main TAMP Phase 2 document identifies 5 service standards of POOR, ACCEPTABLE, FAIR, GOOD and EXCELLENT, against which the benefits to the users of the asset can be measured. Details of the generic levels of service that each of the transport asset groups are likely to provide to users at each service standard are contained in Appendix 1 of the TAMP Phase 2 document which can be accessed here.

The condition data contained in this data refresh document enables us to compare our performance against the baseline figure contained in the TAMP and our direction of travel.

The TAMP set an overall indicative service standard target of GOOD to be achieved at the end of period 2020/21-2024/25. In setting an overall indicative service standard target of GOOD it is recognised that it is not possible or affordable to maintain all asset groups to the same level. The targets for individual asset groups have, therefore, been set according to county council priorities, risk and affordability.

The overall condition of the transport infrastructure asset has been determined by assigning scores to each service standard. A weighted score has been produced by multiplying each score by the asset valuation. A weighted average is calculated by dividing the total weighted scoring by the total value of the asset, as detailed below:

Scores per Service Standard				
POOR	ACCEPTABLE	FAIR	GOOD	EXCELLENT
1	2	3	4	5

We are no longer required to collect Whole of Government Account information for highways. Therefore, for consistency purposes and to allow us to monitor progress against the start of the TAMP in April 2015, we will continue to use 2018/19 data throughout Phase 2 of the TAMP.

Asset Condition Summary March 2024

The initial TAMP assessed the service standard to be 2.06 which determined the transport asset to be in an ACCEPTABLE condition. As a result of this data refresh the condition of the service standard has been calculated at 2.69 which places us ACCEPTABLE. In 2021 the new service standards were introduced and the Asset Condition Summery now reflects these changes.

For the 2021 assessment the unclassified roads, footways and Street Lighting were incorrectly assessed, this has now been adjusted and the Service Standard Score for 2021 (original and adjusted), 2022, 2023 and 2024 can be seen below. The full scoring matrix for 2024 can be seen below.

Service Standard	
2021	2.06
2021 corrected	3.24
2022	3.11
2023	3.05
2024	2.69

As the unclassified roads are our largest and valuable asset, we will only be able to bring about significant overall improvements once the condition of this asset improves. The dip from previous year is as a result of a slight dip in the ABC road condition, which will be addressed during Phase 3 of the TAMP.

According to the general service standards set out in Appendix 1, of the TAMP Phase 2 document which can be accessed here, our highway and transport asset network should be regarded as being generally free from critical safety defects, although considerable maintenance backlogs do exist which have accumulated.

In general, due to insufficient resources being made available over a period of time to maintain the whole asset base.

Asset Condition Summary March 2024

Overall Service Standard – Grade Boundaries				
POOR	ACCEPTABLE	FAIR	GOOD	EXCELLENT
1 to 1.9	2 to 2.9	3 to 3.9	4 to 4.9	5

Asset Group	Valuation * £ Million	Service Standard	Score	Weighted Score
Carriageways, Footways and Cycleways				
A Roads % Red	855	ACCEPTABLE	2	2,138
A Roads % Amber		FAIR	3	
B Roads % Red	504	ACCEPTABLE	2	1,260
B Roads % Amber		FAIR	3	
C Roads % Red	1,445	POOR	1	2,168
C Roads % Amber		ACCEPTABLE	2	
Residential Unclassified Roads % Red	3703	POOR	1	11,109
Residential Unclassified Roads % Amber		EXCELLENT	5	
Rural Unclassified Roads % Red	1161	POOR	1	3,483
Rural Unclassified Roads % Amber		EXCELLENT	5	
Footway & Cycleways % Red	727	GOOD	4	1817.5
Footway & Cycleways % Amber		POOR	1	
Asset Group	**Valuation * £ Million**	**Service Standard**	**Score**	**Weighted Score**
Bridges & Similar Structures				
Planned Targeted	1201	FAIR	3	4,003
Planned Preventative		FAIR	3	
Planned Do Minimum		GOOD	4	
Retaining Walls	205	FAIR	3	615
Other Assets				
Street Lighting	155	POOR	1	155
Traffic Signals	19	ACCEPTABLE	2	38
Total	9,975			26,786
Weighted Average Score		=		**2.69**

10.0 Conclusion

By tracking condition data, it has been shown that a change in approach from 'worst first' to a preventative maintenance regime has already had a big impact on our road network, particularly on the A, B and C road categories, which has seen the condition of many roads in a number of district areas improve to at least those enjoyed in 2012, as measured by the % or **Red** or **Amber** roads across this network.

A change in approach from allocating funds on a district basis purely according to asset numbers/lengths and worst first in favour of a countywide approach where funding is based on need, as determined by the relevant condition data, and adopting a preventive strategy has normalising the condition of each asset grouping across Lancashire. This approach needs to be continued so that all our residents and service users are able to benefit from the same service standard regardless of district area.

Due to continued pressures from the DfT the county council cannot afford to stand still. It needs to continue to adapt and evolve if it is to secure the same or increased level of funding as it does now. Failure to attract sufficient funding will threaten the county council's ability to apply the TAMP principles in future years.

Using a risk-based approach and lifecycle modelling has significantly enhance the county council's knowledge of the condition of assets and enables us to continue scenario planning so that we are able to assess future maintenance costs and plan the best way to manage all assets in the future. We still face many challenges as a result of insufficient funds to address the backlog.