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**October 2018**

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**Transport Asset Management Plan – Draft Data Refresh October 2018**

**Executive Summary**

The Transport Asset Management Plan 2015-2030 (TAMP) was approved by the Cabinet Member for Highways and Transport on 10 June 2014 and identifies the key strategic priorities of the County Council, as the highway authority for Lancashire, during the period 2015/16 to 2029/30.

This document provides an update of the changes that have occurred both nationally within the highway sector since the original TAMP was approved and locally within Lancashire. This document also provides us with an opportunity to report the latest condition of our assets so that our performance over the past 12 months can be measured and scrutinised.

This data refresh is intended to supplement both the original TAMP and previous years refresh documents rather than replace them, so that when these documents are read together they provide an up to date and ongoing analysis of the current condition of our transport assets and detailed information of any new pressures we are facing.

In addition, the annual data process enables the County Council to include information about those transport assets that were not included in the TAMP but for which further information is now available or highlight any changes that are proposed for data capture as a result of using new technology etc.

Shortly after producing the last TAMP refresh document in December 2017 the County Council completed the annual self-assessment questionnaire and assessed its performance against Department for Transport (DfT) criteria. As a result of this exercise, the County Council considered itself to still be a Band 3 authority in terms of Highway Asset Management. As a result, the County Council has received notification from the DfT that it will receive 100% of its 2018/19 Incentive Fund allocation (approx. £3,867,000). Authorities in Band 1 or 2 will only receive part of their Incentive Fund allocation.

Over the past 12 months good progress has been made in respect of the condition of the A, B and C road networks, which have continue to improve and their condition is now better than they were in 2009. The condition of our highway and transport assets has deteriorated slightly over the past 12 months, which has resulted in their overall condition falling slightly from 2.08 to 2.07. Whilst this score has fallen, overall our assets are still regarded as being ACCEPTABLE.

The table below sets out the TAMP Service Standards, the 2013 baseline condition data and subsequent years condition data.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Asset Category** | | **Measure** | **Service Standard** | | | | | **Asset Condition** | | | | |
| **POOR** | **ACCEPTABLE** | **FAIR** | **GOOD** | **EXCELLENT** | **2013/14** | **2014/15** | **2015/16** | **2016/17** | **2017/18** |
| **A Roads** | | % RED / AMBER | **>25%** | **25 - 16%** | **15 - 11%** | **10 - 6%** | **≤5%** | **22.1%** | **30.37%** | **23.92%** | **23.08%6** | **22.29%** |
| **B Roads** | | **>40%** | **40 - 21%** | **20 - 16%** | **15 - 6%** | **≤5%** | **42.3%** | **36.01%** | **28.10%** | **26.27%** | **24.65%** |
| **C Roads** | | **>50%** | **50 - 31%** | **30 - 21%** | **20 - 11%** | **≤10%** | **48.7%** | **38.59%** | **30.62%** | **34.26%6** | **32.04%** |
| **Residential Unclassified** | | % RED / AMBER | **>50%** | **50 - 31%** | **30 - 21%** | **20 - 11%** | **≤10%** | Not Collected | Not Collected | Not Collected | Collected being analysed1 | Collected being analysed1 |
| **Rural Unclassified** | | % RED / AMBER | **>50%** | **50 - 31%** | **30 - 21%** | **20 - 11%** | **≤10%** | Not Collected | Not Collected | Not Collected |
| **Footways** | | No. defects | **>50,000** | **50,000 - 40,000** | **40,000 -15,000** | **15,000-10,000** | **<10,000** | **51,3952** | **22,1712** | **13,5332** | **13,0372** | **7,142** |
| No. claims | **>600** | **500-400** | **400-250** | **250-150** | **<150** | **359** | **298** | **259** | **130** | **04** |
| **Bridges and Similar Structures** | | Bridge Condition Index (Ave.) | **<40** | **40-60** | **60-79** | **80-90** | **>90** | **89.3** | **89.99** | **90.19** | **89.75** | **89.67** |
| **Street Lighting** | | % of high / medium risk installations | **>35%** | **25-35%** | **20-25%** | **10-20%** | **5-10%** | **23.15%** | **17.72%3** | **19.99%3** | **16.15%3** | **15.66%** |
| **Traffic Signals** | | % of units beyond design life | **>40%** | **30-40%** | **20-30** | **10-20** | **<10%** | **33.11%** | **33.11** | **30.31** | **30.315** | **13.83** |
| 1 - | Condition data is being collected for the unclassified network using Detailed Video Survey methodology for unclassified roads. Analysis is currently being undertaken and will be reported as part of the 2018/19 data refresh. Provisional data shows that the unclassified road network is POOR compared to the C road network | | | | | | | | | | | |
| 2 - | Changes in defect reporting systems for footways meant 2013 data is not comparable to subsequent year's data. Detailed Video Survey data for footways is available | | | | | | | | | | | |
| 3 - | Data cleansing means that 2013 & 2014 data is not directly comparable with subsequent years data for Street Lighting | | | | | | | | | | | |
| 4 - | Migration to HAMS means we data can no longer be split by road classification – condition assumed to remain unchanged. | | | | | | | | | | | |
| 5 - | There was a delay in 2016/17 in updating traffic signal inventory as efforts were focused on keeping these installations operational. | | | | | | | | | | | |
| 6 - | The condition of the 2016/17 'A' road network has been amended after minor errors were detected in the 2016/17 calculation, which did affect our overall score last year | | | | | | | | | | | |

1. **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 it is intended to 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 Councils highway and transport asset network. This update includes information relating to:-

* TAMP Phase 2 Review
* DfT Self-Assessment Questionnaire,
* Consideration of the Well Managed Highways Infrastructure Code of Practice,
* Service Standard Update
* Highway Management Plan
* Revised asset condition data,

1. **TAMP Phase 2 Review**

The second phase of the TAMP is due to start in April 2020. The priorities for Phase 1 concentrated resources on the A, B and C road and footway networks whilst maintaining our other transport assets as close to their 2013 condition as resources will allow.

Phases 2 is intended to focus on the unclassified road network whilst Phase 3 will target Structures, Street Lighting and Drainage priorities.

It is proposed to start an objective review of current asset condition against approved standards and predict changes in condition, based on range of scenarios through Lifecycle modelling, for the different asset groups for the end of Phase 1 and the end of phase 2. This information will ensure that Phase 2 allocations are apportioned so the TAMP can deliver the County Councils objectives so our Transport Assets can be maintained at the desired service standard.

A timetable is currently being drafted in order that we can manage this important piece of work. When complete, the results of this exercise will be presented to a future Cabinet meeting for approval.

1. **Well Managed Highways Infrastructure Code of Practice:**

The introduction of ‘The Well Managed Highway Infrastructure Code of Practice’, published in October 2016 and commissioned by the DfT, has superseded the previous code relating to highways inspection and maintenance, advocating a Risk Based approach be developed by local authorities to managing the highway network. Highway Authorities had until October 2018 to be compliant with the Code.

Whilst touching on all aspects of highway maintenance the risk based approach now recommends that the safety inspection regime and defect repair regime should be based on risk. Cabinet considered and approved a revised Highway Safety Inspection Policy in April 2018 which sets out a method for assessing the risk posed by defects and hazards and establishes a practical process to facilitate this.

Annex 'A' of the Highway Safety Inspection Policy sets out in detail how this risk based approach is applied to the most common defects and shows the investigatory levels, specific risk assessment, impact rating, and the response time to repair or make safe the defect. This means that defects of a certain size or in a certain location may require more urgent attention than other defects where the locations and sizes are such that longer periods of response will be reasonable.

### **Risk Based Inspections**

As well as Highway Safety Inspections the risk based approach should also be applied to prioritising other types of inspections and assessments. In considering the capital budget for 2018/19 Cabinet agreed in January 2018 that £0.974m from the Incentive Fund allocation could be used for Risk Based Assessments/Inspections.

In line with ‘The Well Managed Highway Infrastructure Code of Practice’, a risk based approach has been embedded into our approved Lifecycle Plans and the approved Structures and Street Lighting Lifecycle Plans indicate a number of areas where higher risks have been identified, for which there is currently no funding available.

The £0.974m allocation enabled a number of bridge related post tension inspections and scour assessments to be carried out and a selection of steel lighting columns to be tested during 2017/18.

As a result of this funding we were able to test in the region of 2,000 steel columns that had been identified from a particular pattern on the column door as these were thought to be close to the end of their service life. Of these, 15 columns were taken down and replaced immediately, 44 are scheduled for replacement shortly and a further 74 will need to be re-tested in the next 18 months to ensure that they are still fit for purpose. As doors are interchangeable a small number of columns that were tested were identified as being of a different type. In all such cases the inventory has been updated accordingly. A further batch of columns are scheduled for inspection in 2018/19.

The funding enabled us to undertake a range of inspections and desk studies of bridges and highway structures that present an elevated risk to users due to a range on both known and potential issues. This has comprised of Principal Inspections of 56 bridges, assessment of scour risk across the network, investigation of post-tensioning systems, high-risk parapets, monitoring of weak bridges and the continuing validity of load-carrying capacity assessments. The findings will inform a risk based programme of works and inspections for 2019/20.

The 2018/19 Incentive Fund will enabled a further batch of structures to be inspected and lighting columns to be tested. In future years we propose to carry out limited inspections of vehicle restraint systems currently in place across Lancashire. A Vehicle Restraint System Code of Practice is currently being drafted and once the risk based approach has been finalised this document will be presented to Cabinet for approval.

In September 2018 Cabinet approved the Tree Safety Management guidance document which also established a risk based approach for the inspection of trees growing within or close to the vehicular highway.

### **Future Developments**

In advance of the October 2018 deadline, the date by which the Well Managed Highways Infrastructure Code of Practice had to be adopted by Highway Authorities, we undertook a gap analysis to identify any outstanding matters.

As part of this, it was recognised that the only outstanding issue was the task of redefining our highway network hierarchy. We have previously met with the County Councils insurers, Zurich Insurance, to discuss the implementation of 'Well Managed Highway Infrastructure: Code of Practice' and we raised with them how we were intending to approach this task. Following discussion Zurich Insurance said they were happy with our proposals.

Since 2014 the County Council has undertaken a review of its core systems and has now migrated most of its transport / highway asset inventory data to the Insight, which is a central highways asset management system (HAMS). As part of this process all legacy inventory systems have been discontinued meaning that some of datasets we used in 2014 are no longer available, or if they are, they are based on a different methodology which makes it difficult to accurately compare some 2014 data to 2018 data.

As HAMS is a modern system it is able to produce condition data that our legacy systems were not able to do. As a result of the Bridges Lifecycle Plan we are looking to review how the condition of our bridges is monitored so that it more accurately represents the strategic nature of our structures across our highway network so we can avoid a similar situation to that which occurred recently in Italy were a bridge of a strategic road collapsed without warning.

A key task of the TAMP phase 2 therefore is to re-examine what datasets we need in order that we can monitor our asset condition in the most appropriate way.

We have allocated £200,000 during 2018/19 to the 'Moss Road' network to carryout re-tread works at selected locations. In order that we can allocate monies in future based on need we are developing a 'Moss Road Strategy' which will look at setting service standards and defining the appropriate preventative and reactive works we propose to use on these roads which due to their nature, pose a higher degree of engineering difficulty compared to other road types.

1. **DfT Self-Assessment Questionnaire**

As mentioned in the last TAMP refresh, the DfT have introduced changes to the highway maintenance formula funding mechanism at in order to encourage local authorities to adopt good asset management practices across England.

As a result each authority will now be 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.

Our last self-assessment was validated by the County Council's s151 officer and submitted to the DfT in January 2018. As a result of this exercise, the County Council assessed itself as still being a Band 3 authority.

Should the County Council not consider itself to a Band 3 authority when the next self-assessment exercise takes place in January 2019, it will only receive part of its Incentive Fund allocation in 2019/20. Details of the 'incentive bands' and funding % for future years are shown below:-

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Band 1 | Band 2 | Band 3 |
| 2018/19 | 30% | 70% | 100% |
| 2019/20 | 10% | 50% | 100% |
| 2020/21 | 10% | 30% | 100% |

Based on the Indicative needs/formula allocation (£) announced in December 2014 the table below shows the level of funding the County Council could expect to receive at each of the three funding bands over the period 2018/19 to 2020/21

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Band 3 | Band 2 | Band 1 |
| 2018/19 | 3,867,000 | 2,707,000 | 1,160,000 |
| 2019/20 | 3,867,000 | 1,934,000 | 387,000 |
| 2020/21 | 3,867,000 | 1,161,000 | 0 |

Actual allocations may be slightly higher than this as the DfT will reallocate any surplus monies to all authorities in accordance with the needs-based proportions.

Given the reductions in highway funding over the past few years and the future financial challenges the County Council is facing it is imperative that we retain our 'Band 3' status for the foreseeable future.

From DfT guidance it is vital that local authorities have the support of members, senior officers and a good quality TAMP in place that is refreshed and updated on a regular basis.

A summary of self-assessment questions, areas covered and our January 2016, 2017 and 2018 scores are shown below:-

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Area Assessed** | **2016** | **2017** | **2018** |
| 1 | Asset Management Policy and Strategy | 3 | 3 | 3 |
| 2 | Communications | 2 | 3 | 3 |
| 3 | Performance Management Framework | 2 | 3 | 3 |
| 4 | Asset Data Management | 2 | 3 | 3 |
| 5 | Lifecycle Planning | 2 | 2 | 2 |
| 6 | Leadership and Commitment | 2 | 3 | 3 |
| 7 | Competencies and Training | 1 | 3 | 3 |
| 8 | Risk Management | 2 | 3 | 3 |
|  | **Resilience** |  |  |  |
| 9 | Resilient Network | 2 | 3 | 3 |
| 10 | Implemented Potholes Review | 2 | 3 | 3 |
| 11 | Implemented the Drainage Guidance | 2 | 3 | 3 |
|  | **Customer** |  |  |  |
| 12 | Satisfaction | 2 | 3 | 3 |
| 13 | Feedback | 2 | 3 | 3 |
| 14 | Information | 2 | 3 | 3 |
|  | **Benchmarking and Efficiency** |  |  |  |
| 15 | Benchmarking | 2 | 3 | 3 |
| 16 | Efficiency Monitoring | 2 | 3 | 3 |
|  | **Operational Service Delivery** |  |  |  |
| 17 | Periodic Review of Operational Service Delivery | 2 | 3 | 3 |
| 18 | Supply Chain Collaboration | 2 | 3 | 3 |
| 19 | Lean Reviews | 2 | 3 | 3 |
| 20 | Works Programming | 2 | 2 | 3 |
| 21 | Collaborative Working | 2 | 3 | 3 |
| 22 | Procuring External Highway Maintenance Services | 2 | 3 | 3 |

If an authority scores 1 in questions 1, 2 or 5, they will automatically be placed in Band 1 overall, regardless of their other scores. A summary of LCC's 22 scores is provided below:-

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2016** | **2017** | **2018** |
| Level 1 | 1 | 0 | 0 |
| Level 2 | 20 | 2 | 1 |
| Level 3 | 1 | 20 | 21 |
| **Overall Band** | **2** | **3** | **3** |

As a result our assessment of our performance and DfT guidelines the County Council assessed itself to be a Band 3 authority in January 2017 and due to improvements in relation to work programming we strengthened our position as a Band 3 authority.

1. **Service Standard Update**

### **Condition – Unclassified Roads**

As reported last year we have undertaken highway video surveys of the unclassified road network. The provider of this service uses vehicles that are mounted with several high definition cameras that records the road surface. The provider then analyses the video footage so that the appropriate road condition can be assigned to a particular section of road. Following the completion of this work the County Council examined the results of the survey and as a result of some discrepancies and omissions, the provider has agreed to undertake further works, at no additional cost to the County Council in order to refine their works. This remedial work is expected to be delivered in the next month. Once we have this information we will look at setting a service standard and present our proposals to cabinet for approval.

When complete, we will have a better understanding of our rural / urban roads and will inform our investment decisions ahead of the commencement of Phase 2 of the TAMP.

### **Condition – Footway Network**

Whilst our footway network has been the subject of a video survey we are awaiting the provider to complete outstanding remedial works, as above, so that we can get a better insight of the condition of our footway network.

We will in the meantime continuing to use the number of defects / claims as a means of measuring levels of service.

1. **Highway Management Plan**

The Highway Maintenance Plan was approved in 2009 and since then there have been many changes within the highway sector; including changes to the level of available finance and changes to the way the highway assets are maintained, with a move towards a risk based prioritisation approach. As a result, we need to manage more how we maintain our highway assets and the Highway Maintenance Plan has been renamed the Highway Management Plan to reflect this.

At their October 2018 meeting, the Cabinet were asked to approve a new Highway Management Plan, which had been drafted to in response to the 'Well Managed Highway Infrastructure Code of Practice’. The Highways Management Plan, has been updated to consolidate into one place all changes that have previously been approved in relation to:-

* Transport Asset Management Plan
* Highway Asset Management Framework
* Flood Risk Strategy
* Gully Cleaning Code of Practice
* Lifecycle Plans relating to Street Lighting, Structures and Carriageways
* Resilient Road Network
* Skid Resistant Policy
* Trash Screen Code of Practice
* Vehicular Crossing Code of Practice
* Changes in Service Standards in response to funding constraints, e.g. road markings, grass cutting, road signs and street lighting repairs

As and when changes to codes of practice are approved, or new codes of practice are introduced, all such changes will be approved by Cabinet. The Highway Management Plan will also be updated, but the revised document will not be presented to Cabinet again as these already have had Cabinet approval.

1. **Revised Asset Condition Data**

Much of the condition data contained in the Transport Asset Management Plan was compiled in the 18 month period prior to Cabinet Member for Highways and Transport approving the TAMP in 2014 and was used to calculate the overall service standard that the transport assets were providing users at that time.

The 2014 condition data contained in the original TAMP is now updated and reported to members of the Scrutiny Committee on an annual basis. Comparing our latest condition data to the 2014 baseline data, where a change of inventory system permits, enables our on-going performance to be measured and monitored.

The following pages provide a brief summary 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.

Each section follows a similar basic structure. Where possible graphs will show simultaneously 2014 and 2017 data. Where this isn’t possible, two separate graphs will be provided to show the relative condition of the asset on a district by district basis for both years so that year on year comparisons can be made.

A summary provides key bullet points which seek to outline briefly the key facts relating to the category of the asset. Typically information presented includes:

* How much of the asset we responsible for,
* How the condition of the asset is assessed,
* If there any gaps in the information we currently hold,
* The average condition of the asset in 2014 and 2016,
* How much financial resource has, on average, been available in recent years;

**A, B and C Roads**

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

**Summary**

* The asset consists of a total of approx. 2,583km of highway,
* The length of A, B and C roads classified as RED or AMBER in 2014 was in the region of 1,179 km. According to the May 2018 SCANNER survey the quantity of RED or AMBER has now reduced down to 762km, a reduction of 416 km (35%),
* According to SCANNER data the overall condition of the A, B and C road network in all districts are now better than their 2009 condition,
* Between 2014 and 2018 the average % of RED or AMBER on :-
  + A roads reduced by 26% (64km)
  + B roads reduced by 47% (105km)
  + C roads reduced by 34% (248km)
* Overall between 2014 and 2018 the average % of RED or AMBER on the A, B & C road network has reduced by 417km (35%)
* The A, B and C road network is currently regarded as being ACCEPTABLE.

**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.**

**Summary**

* The asset consists of approximately 990 km.
* The current condition is indicated by the number of defects identified by highways inspections, as recorded in the Highway Defect Sort System (HDSS).
* Due to a change from EXOR to HDSS the defects in the original TAMP are not comparable to the latest figures.
* Overall there has been a reduction of approximately 6,000 (46%) critical safety defects on the rural unclassified road network between 2014/15 and 2016/17.
* As we have not had any survey data for the unclassified road network the TAMP has always assumed that the condition of the unclassified road network mirrored that of the 'C' road. As a result of video survey works, we are analysing this data be able to report actual condition in the next refresh.
* Investment is based firstly on maintaining the current condition of the network as far as is practical, and secondly, if investment levels are sufficient, to bring all district areas up to the same county standard.
* The asset is important to the rural economy and to rural communities.

**Residential Roads**

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

**Summary**

* The asset includes approximately 3,130 km of residential roads.
* The current condition is indicated by the numbers of defects identified by highways inspections as recorded in the Highway Defect Sort System (HDSS). Due to a change of systems the 2013 defects numbers in the original TAMP are not comparable to the latest figures.
* Overall there has been a reduction of approximately 2,000 (7.5%) safety critical defects found on the rural unclassified road network between 2014/15 and 2016/17
* We have recently undertaken highway video surveys and are currently working with neighboring authorities to ensure consistent interpretation of the data and development of service standards.
* The estimated investment required to maintain the current rate of deterioration would be £5m per annum.
* Investment is based firstly on maintaining the current condition of the network as far as is practical.
* Secondly, if resources allow, investment will be based on bringing all districts to the county standard.

**Footways**

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

**Summary**

* There are over 8,500km of footways in Lancashire.
* The condition of this asset group has, in the absence of survey data, been determined by the number of defects detected on the footway network and the number of footway claims received.
* Using defect numbers the current condition of the asset is assessed as being EXCELLENT.
* Condition data for the footway network has now been collected by video survey and we are awaiting this to be analysed by the service provider, as detailed earlier in this refresh document.
* Overall there are approximately 13,120 (64%) less defects on the footway network in 2017-18 compared to 2014-15.
* Due to a change in systems we are no longer able to separately identify footway claims from highway or other claims, so can no longer provide this information.
* The estimated capital investment required to maintain the current rate of deterioration would be £2.5m per annum.
* Investment is based firstly on maintaining the current condition of the network as far as is practical and secondly, if resources allow, on bringing all district areas to the same county standard.

**Bridges and Similar Structures**

**Most Cost Effective Strategy: Investment in preventative maintenance which is not based on reconstruction of bridges but is based on appropriate**

**Summary**

* We have good condition information relating to the condition of this asset grouping. We are responsible for approximately 2,000 bridges and similar structures\*,
* The average bridge condition index has improved from 89.3 in 2014 to 89.67 in April 2018. The overall condition of this asset is regarded as GOOD.
* The average bridge condition is regarded as EXCELLENT in Lancaster, Wyre, Pendle, Burnley, Chorley and Fylde. In all other district areas the average bridge condition is regarded as EXCELLENT.
* The investment strategy is based upon identifying bridges and similar structures which have a bridge condition index (critical or adjusted) of < 40\*\*, and producing action plans for each such structure.
* On the basis of the bridge condition data, resources are allocated on the basis of need as individual projects are unlikely to be included in any district based allocation.

\*Excludes maintenance of Network Rail bridges, major new projects or major refurbishments. \*\*A bridge in poor condition does not necessarily require urgent remedial action and is not automatically at risk of failure or subject to load restrictions.

**Street Lighting**

**Most Cost Effective Strategy: The risk to the public from a column falling over is generally low; however, half of our columns exceed the age when they should be regularly tested or considered for replacement or removal. The best strategy is to reduce the likelihood of columns falling over by either replacing or removing the highest risk columns or removal of columns without replacement.**

**Summary**

* We are responsible for approximately 150,000 street lights and 18,400 illuminated signs, bollards and similar installations.
* Our electricity bill for these items is in the region of £5m per annum,
* According to the risk assessment contained in the Institute of Lighting Professionals Technical Report 22 'Managing a Vital Asset' 35% of lighting columns have now exceeded their 'Action Age'.
* Approximately 15% of columns are classed as being either medium or high priority for replacement. The number of medium/high risk columns has reduced from 24,059 to 23,500 over the past 12 months, a reduction of just over 2%
* The current condition of the stock is considered to be GOOD.
* In order to maintain the current rate of deterioration of the stock, it is estimated that a capital investment of the order of £6m per annum would be required. The likely capital investment available for 2018/19 is £1m.

**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.**

**Summary**

* There are 687 sites in Lancashire which are controlled by traffic signal and/or pelican crossing installations.
* The condition of this asset is measured in terms of the age of installations which normally have a service life of 20 years, after which they are no longer supported by the manufacturer.
* We currently have a total of 95 installations (13% of the stock) more than 20 years old – which is reduction of 109 installations (15%) from 2013.
* It is estimated that a replacement programme at a value of £0.5m per year would be required to replace the stock that is no longer supported by the manufacturer.
* A breakdown of traffic signal and pedestrian crossing equipment up to 20 years old (green) and age 21 years and over (red) and no longer supported is shown in the graph above.
* The traffic signal asset group is considered to be in a GOOD condition.

**6) Service Standards**

The Service Standards in the TAMP were derived wherever possible from condition data collected by engineering analysis and 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 contained in the main TAMP will be updated as appropriate and included in a future data refresh document so that they offer a more refined and accurate way of assessing the condition of the asset. Where it is necessary to change the indicators we will clearly explain why such changes are necessary.

The main TAMP 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 shown in Appendix 1.

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

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 following table details those assets covered in the TAMP and shows the service standards currently being provided by the transport assets.

Given the range of assets covered by this TAMP, there will inevitably be differences in the condition of each asset grouping. To some extent this is determined not only by the intervention intervals but also treatment and remediation options.

The 5 year, 10 year and 15 year target for each asset type is shown in the table below:-

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Asset Category** | | **Condition 2013** | **5 Year Target** | **10 Year Target** | **15 Year Target** |
| **A, B & C Roads** (% RED & AMBER) | A | **25%** | 10 - 6% | 10 - 6% | 10 - 6% |
| B | 40% | 15 - 6% | 15 - 6% | 15 - 6% |
| C | **50%** | 20 - 11% | 20 - 11% | 20 - 11% |
| **Residential Unclassified Roads**  (% RED & AMBER) | | **28-40%** | 28-40% | 14-18% | 14-18% |
| **Rural Unclassified Roads**  (% RED & AMBER) | | **28-40%** | 28-40% | 14-18% | 14-18% |
| **Footways**  (Number of defects) | | **50,000-60,000** | **<15,000** | **<15,000** | **<15,000** |
| **Bridges and Similar Structures** Bridge Condition Index (Ave.) | | **80-90** | 80-90 | 80-90 | 80-90 |
| **Street Lighting**  (% of high risk installations) | | **20-25%** | 25-35% | 25-35% | 25-35% |
| **Traffic Signals**  (% of units beyond design life) | | **15-20%** | 30-40% | 20-30% | <10% |

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** |

**Asset Condition Summary June 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Asset Group | Valuation £ Million 2017-18 | Service Standard | | Score | Weighted Score |
| A Roads | 832 | **ACCEPTABLE** | | 2 | 1,664 |
| B Roads | 491 | **ACCEPTABLE** | | 2 | 982 |
| C Roads | 1,406 | **ACCEPTABLE** | | 2 | 2,812 |
| Residential Unclassified Rods | 3,604 | **POOR** | | 1 | 3,604 |
| Rural Unclassified Roads | 1,130 | **POOR** | | 1 | 1,130 |
| Footway & Cycle ways | 698 | **EXCELLENT** | | 5 | 3,490 |
| Bridges & Similar Structures | 1,424 | **GOOD** | | 4 | 5,696 |
| Street Lighting | 216 | **GOOD** | | 4 | 864 |
| Traffic Signals | 17 | **GOOD** | | 4 | 68 |
| **Total** | 9,818 |  | |  | **20,310** |
| **Weighted Average Score** | | | = | | **2.07** |

Overall grade boundaries have been determined as follows:-

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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** |

The initial TAMP assessed the service standard to be 2.26 which determined the transport asset to be in an ACCEPTABLE condition. This improved to 2.56 in 2015, but fell in 2016 to 2.22. As a result of a fall in the condition of 'C' road network the service standard fell in 2016 from FAIR to ACCEPTABLE, resulting in the overall service standard falling to 2.02 Whilst our overall score may have fallen, our overall service standard is still regarded as being ACCEPTABLE.

According to the general service standards in Appendix 1, 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.

**7) Conclusion**

Whilst the overall condition score of our transport assets may have fallen from last year, the condition of the A and B road network and the footway network have continued to improve over the past 12 months. From the above it can be seen that a change in approach from 'worst first' to a preventative maintenance regime has already had a big impact particularly on the A, B and C road network which has seen the condition of many roads in a number of district areas improve to at least those enjoyed in 2009, as measured by the % or RED or AMBER roads across this network.

This approach has also seen a reduction in the number of footway defects across the network.

A change in approach from allocating funds on a district basis purely according to asset numbers/lengths in favour of a countywide approach where funding is based on 'need', as determined by the relevant condition data, is starting to have the desired effect of '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. We need to continue to adapt and evolve if we are to secure the same level of funding as we do now. Failure to attract sufficient funding will threaten the county council's ability to apply the TAMP principles in future years.

The results of the video survey data may require us to revisit the service standards contained in the main TAMP document as we will for the first time in many years have engineering data for the whole of footway and unclassified road networks.

**Appendix 1**

**Generic Service Standards**

|  |  |
| --- | --- |
| **Service Standard** | **Description of Level of Service** |
| **POOR** | **Definition**  Service delivery that is considered to fall below the minimum standard deemed necessary to maintain the asset in a safe manner. As a result only those essential and critical repairs that are affordable are undertaken. The risks and consequences associated with providing this service level are summarised below:   1. **Legal**  * Unable to ensure that we carry out all those duties that are incumbent on the authority through law, statutory duties or mandatory requirements; * Insufficient allocation to carry out works to recommendations contained in relevant codes of practice for which there is no approved derogation; * Authority is more exposed to legal action up to and including corporate manslaughter; * Degree of risk may be mitigated by a robust risk assessment which describes the reasons for deviation from the code of practice.  1. **Safety**  * In all cases **except** where the asset condition was formerly GOOD or EXCELLENT it is likely to result in a significant increase in the risks associated with safety or legal deficits; * Risks associated with the asset may be increased with attendant risks of legal exposure; * Likely to result in a significant increase in third party claims against LCC for personal injury and third party damage; * Heavy reliance on Safety Inspection regime to identify defects.  1. **Availability**  * Availability of entire network cannot be guaranteed; * Poor asset condition means parts of the asset may be withdrawn on a temporary or permanent basis to reduce the safety and legal exposure of the authority; * As no programmed maintenance work is undertaken assets may be withdrawn from service for some time.  1. **Condition**  * Condition of the asset will quickly deteriorate as investment is not keeping pace with the maintenance requirements. This standard is not sustainable over the long term; * It is assumed that the rate of deterioration exceeds the under investment required to maintain condition by a factor of at least 50% i.e. investment £10m less than required means a depreciation of £15m in asset value.  1. **Asset Value**  * Asset value is likely to be depreciating more rapidly as a result of minimal investment; * Maintenance heavily reliant on reactive activities which result in unpredictable financial management and highest whole life costs; * The cost of investment needed to return the stock to the minimum standard is growing rapidly and exceeds the resources available.  1. **Public Perception**  * Likely to be well aware that the asset is deteriorating and is becoming less available, safe or fit for purpose; * Members in particular will be facing pressure for improvement and will seek to react to local pressures potentially diluting the impact on overall asset condition; * Complaints and claims would be expected to be high.  1. **Service Delivery**  * The principle focus is likely to be reactive maintenance with minimum or no preventative maintenance intervention to prevent asset deterioration; * It will not be possible to address all issues rapidly and a prioritisation of service demands will be required; * It is likely that increasing portions of the asset are removed from service and that the trend accelerates with time as the asset ages; * An increasing backlog of maintenance issues will exacerbate the service problems and lead to a further chain reaction of deterioration; * Depreciation in the asset value would be expected to exceed the under investment required to achieve a FAIR standard. It would be expected that initially deterioration would outstrip underinvestment by 50% with that proportion tending to increase year on year. |
| **ACCEPTABLE** | **Definition**  The minimum level of service to meet most statutory requirements and compliance with minimum requirements detailed in national codes of practice. The risks and consequences associated with providing this service level are summarised below :   1. **Legal**  * The authority complies with the requirements of the relevant codes of practice in all key respects; any derogation is documented and supported by a robust risk assessment; * We know what is required and how we deliver the requirements.  1. **Safety**  * High reliance on Safety Inspection regime to identify defects; * In all cases **except** where the asset condition was formerly GOOD or EXCELLENT it is likely to result in an increase in the risks associated with safety or legal deficits; * Safety defects are well defined with performance standards for rectification of those defects. Systems are in place to ensure proper assessment prioritisation and rectification of defects or temporary arrangements to mitigate risk until a permanent repair is possible; * We have relevant information to support our delivery to required performance standards.  1. **Availability**  * The majority of the asset is available for normal reasonable use.  1. **Condition**  * The condition of the asset is deteriorating but at a reduced rate compared to POOR standard; * It is assumed that the rate of deterioration over under investment is of the order of 30% i.e. £10m underinvestment results in £13m of deterioration.  1. **Asset Value**  * The asset value is likely to be depreciating as a result of minimum investment.  1. **Public Perception**  * Likely to be well aware that the asset is deteriorating and is becoming less available, safe or fit for purpose; * Members in particular will be facing pressure for improvement and will seek to react to local pressures potentially diluting the impact on overall asset condition; * Complaints and claims would be expected to be high. It is highly likely that members or the public would easily distinguish between POOR and ACCEPTABLE standards in their localities.  1. **Service Delivery**  * The principle focus is likely to be reactive maintenance rather than preventative works undertaken at the optimal time; * It will not be possible to address all issues rapidly and a prioritisation of service demands will be required; * An increasing backlog of maintenance needs will exacerbate the service problems and lead to a further chain reaction of deterioration; * Depreciation in the asset value would be expected to exceed the under investment required to achieve a FAIR standard; * It would be expected that initially deterioration would outstrip underinvestment by 30% with that proportion tending to increase year on year. |
| **FAIR** | **Definition**  A level of service that generally meets statutory needs and the requirements detailed in national codes of practice. The risks and consequences associated with providing this service level are summarised below:   1. **Legal**  * The authority complies with the requirements of the relevant codes of practice in all respects and a robust risk assessment exists, except where it chooses not to carry one out. In all such instances any derogation is documented and supported by a robust risk assessment; * We know what is required and how we deliver the requirements; * The legal exposure of the authority is reasonably controlled and robust systems are in place to provide supporting evidence of compliance with the code of practice.  1. **Safety**  * Safety defects are well defined with performance standards for rectification of those defects; * Systems are in place to ensure proper assessment prioritisation and rectification of defects or temporary arrangements to mitigate risk until a permanent repair is possible; * We have relevant information to support our delivery to required performance standards. We are proactive in the identification and rectification of those defects; * In all cases **except** where the asset condition was formerly GOOD or EXCELLENT it is unlikely to result in an increase in the risks associated with safety or legal deficits.  1. **Availability**  * The majority of the asset is available for normal reasonable use; * Restrictions of the asset are largely planned maintenance activities rather than emergency repairs with the exception of emergency utility repairs.  1. **Condition**  * The condition of the asset is stabilised or with minor deterioration; * It is assumed that the rate of deterioration is under 10%.  1. **Asset Value**  * The asset value is likely to be depreciating as a result of other external factors rather than under investment.  1. **Public Perception**  * It is likely that public opinion does not reflect the condition of the asset and the presence of any defects at all would be considered by members of the public to indicate that the asset was in poor condition.  1. **Service Delivery**  * A mixture of preventative maintenance undertaken at the optimal time and reactive maintenance will be delivered although it is possible that outside pressure focuses some investment in areas which do not serve to improve the condition of the asset; * The backlog of maintenance needs will probably be growing but at a reduced rate, due to any severe weather events and the reduction of our ability to focus on technically driven programmes. |
| **GOOD** | **Definition**  A level of service that is above statutory needs and the requirements detailed in national codes of practice. The risks and consequences associated with providing this service level are summarised below:   1. **Legal**  * The authority generally exceeds the requirements of the relevant codes of practice in key respects; any derogation is minor and defensible, documented, and supported by a robust risk assessment; * We know what is required and how we deliver the requirements; * We are able to defend legal claims robustly and develop a strong due diligence defence.  1. **Safety**  * Safety defects are well defined with performance standards for rectification of those defects; * Systems are in place to ensure proper assessment prioritisation and rectification of defects or temporary arrangements to mitigate risk until a permanent repair is possible; * We have supporting information to ensure our delivery to required performance standards; * Should see a reduction in numbers of third party claims against LCC for personal injury and third party damage.  1. **Availability**  * The vast majority of the asset is available for normal reasonable use.  1. **Condition**  * The condition of the asset has been stabilised but significant improvements will take time It is assumed that the rate of deterioration is minimal.  1. **Asset Value**  * The asset value is maintained as far as is reasonably practical; * Relatively high costs in the short term as intervention measures are used to improve asset condition – results in lower whole life costs.  1. **Public Perception**  * It is likely that public perception is still focused on the defects present and that it will take significant time before any improvement in perception of the asset is noted.  1. **Service Delivery**  * A mixture of preventative and reactive service delivery models will be used as the backlog of maintenance issues will only be reduced slowly if at all; * Increased capital budget enables preventative maintenance to be carried out. Such works are directed at intervening at the right point to restore the asset to an appropriate condition at minimum cost. |
| **EXCELLENT** | **Definition**  A level of service that is well above statutory needs and the requirements detailed in national codes of practice. Service delivery aimed at maintaining the asset to a high standard. The risks and consequences associated with providing this service level are summarised below:   1. **Legal**  * The authority complies with the requirements of the relevant codes of practice in all respects; any minor local derogations are documented and supported by a robust risk assessment; * We know what is required and how we deliver the requirements; * We further understand future needs and pressures and have a well developed strategic plan for the next five years.  1. **Safety**  * Significant reduction in claims against LCC for personal injury and third party damage; * Safety defects are well defined with performance standards for rectification of those defects; * Systems are in place to ensure proper assessment prioritisation and rectification of defects or temporary arrangements to mitigate risk until a permanent repair is possible; * We have relevant information to support our delivery to required performance standards**;** * Performance standards are challenging and reviewed regularly.  1. **Availability**  * The asset is available for normal reasonable use.  1. **Condition**  * The condition of the asset is improving strongly with asset value increasing; * It is increasingly possible to flexibly assign resources to selected programmes each year as the relative deterioration is marginal year on year.  1. **Asset Value**  * The investment required to bring the asset to an as new condition is reducing; * High costs in the short term as intervention measures are used to improve asset condition – results in lowest whole life costs.  1. **Public Perception**  * Generally public perception of the condition of the strategic and residential road network would be expected to be positive however the response to the few defects remaining will be disproportionate as expectations will steadily increase; * The majority of the asset improvements will be less visible and the general public and members would not be expected to notice improved drainage, improving lighting column condition or improving bridge condition.  1. **Service Delivery**  * The principle service delivery is focused on preventative maintenance at the optimal time in an assets life cycle which will effectively reduce the average cost per scheme, particularly in respect of roads, and in turn fuel more rapidly improving condition; * Operating at a sustainable level using sustainable methods. |

**APPENDIX 2**

**Asset Quantities**

Provided below is a summary of the number of items we are currently maintaining per asset type.

|  |  |  |
| --- | --- | --- |
| **Adopted Asset Type** | **Asset Quantity** | **Unit of Measurement** |
| County Motorways | 26 | km |
| A Roads | 841 | km |
| B Roads | 458 | km |
| C Roads | 1,284 | km |
| Unclassified Roads | 4,400 | km |
| Footways | >8,500 | km |
| Bridges & Similar Structures |  |  |
| Bridge | 1,335 | No |
| Bridge (Bridleway) | 7 | No |
| Bridge (Occupation) | 5 | No |
| Footbridge | 313 | No |
| Rural Footbridge | 1,127 | No |
| Stepping Stones | 13 | Sites |
| Subways | 121 | No |
|  |  |  |
| Street Lighting | 150,075 | No. |
| Illuminated Signs and Bollards etc. | 18,441 | No. |
| Traffic Signals | 324 (approx.) | Sites |
| Pedestrian Crossings | 293 (approx.) | Sites |
|  |  |  |