



Transport Asset Management Plan (TAMP)

Section 2 – Annual Update Report 2020



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Status	Full
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1. Introduction

1.1 The Transport Asset Management Plan (TAMP) is divided into two sections:

- Section 1 - Policy; and
- Section 2 - Annual Update Report.

1.2 This Annual Update Report provides an update to stakeholders on:

- Inventory;
- Condition;
- Maintenance backlog;
- Public satisfaction;
- Performance;
- Valuation;
- Budgets; and
- Investment levels.

2. Inventory

2.1 The inventory is a database containing details of the individual assets that make up the highway network.

2.2 It is vital to know what assets exist and where so they can be inspected, surveyed and maintained to appropriate service levels.

2.3 The inventory 2020-2021 is summarised in the table below:

Asset	Unit	Adopted	DCC Unadopted	Private Unadopted	Total	RAG Rating
Carriageway						
A	Km	415	0	0	415	G
B	Km	406	0	0	406	G
C	Km	695	0	0	695	G
Unclassified	Km	2,287	18	117	2,422	G
Sub-Total		3,803	18	117	3,938	
Kerbing	Km	4,606	23	153	4,782	R
Drainage						
Gullies	Number	110,633	1,371	3,864	115,868	R
Ditches	Km	263	16	44	323	R
Pipework	Km	378	4	12	394	R
Road markings						
Lines	Km	2,285	8	23	2,316	R
Other items	Number	23,048	179	503	23,730	R
Footway						
Bitumen	Km	3,348	81	93	3,498	G
Flagged	Km	274	8	21	313	G
Concrete	Km	106	3	20	130	G
Block paved	Km	23	1	2	26	G
Other	Km	1	10	5	16	G

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Sub-Total		3,752	103	141	3,996	
Structures						
Road bridges	Number	487*	0	0	487	G
Footbridges	Number	51*	455	0	506	G
Retaining walls	Number	271*	0	0	271	A
Culverts	Number	65*	0	0	65	G
Subways	Number	34*	0	0	34	G
Other	Number	114*	6	0	120	G
Sub-total		1022*	461	0	1,483	
Street lighting						
Columns/Lanterns	Number	82,423*	0	0	82,423	G
Lit Signs	Number	5,737*	0	0	5,737	G
Sub-total		88,160	0	0	88,160	
Traffic Management						
Traffic lights	Number	69	0	0	69	G
Pedestrian crossings	Number	73	0	0	73	G
Sub-Total		142	0	0	142	
Street Furniture						
Safety fencing	Km	53	0	0	53	A
Bollards	Number	12,507	0	0	12,475	R
Salt/grit bins	Number	2,500	0	0	2,384	A
Waste bins	Number	7,094	0	0	7,085	R
Unlit signs	Number	63,460	808	2,277	66,381	R
PROW/bridleway signs	Number	4,312	0	0	4,312	R
Trees	Number	5,000	0	0	5,000	R
Land						
Urban	M ²	19,556,741	388,476	608,600	20,553,817	G
Rural	M ²	11,415,625	226,202	354,375	11,996,202	G
Sub-Total	M ²	30,972,366	614,678	962,975	32,550,019	-

*last years data has been used due to issues with obtaining current values

2.4 The RAG (Red, Amber, Green) Rating denotes the accuracy of the inventory where:

Inventory RAG Rating	Description
R (Red)	Low accuracy
A (Amber)	Moderate accuracy
G (Green)	High accuracy

2.5 There are gaps in the inventory and condition data relating to some minor assets. These gaps will continue to be addressed through further surveys as far as it is proportionate and economic to do so.

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2.6 The inventory grows each year due to new developments. A summary showing the growth in the inventory is shown in Appendix 1.

2.7 The growth in the inventory puts pressure on maintenance budgets as they have to cover more assets each year.

3. Condition

3.1 Condition is summarised as follows in accordance with the policy:

Asset	Description	Performance							
		2015	2016	2017	2018	2019	2020	Good Condition Target	Fair Condition Target
Carriageway									
A – Roads	% where maintenance should be considered	4.9%	4.1%	2.6%	2.6%	3.0%	3.1%	0.0%	4.0%
B – Roads		7.5%	5.3%	4.7%	4.7%	3.3%	3.0%	0.0%	4.0%
C – Roads		5.0%	3.6%	3.7%	3.7%	2.3%	2.6%	0.0%	4.0%
Unclassified Roads	% where maintenance should be considered	19.0%	20.0%	20.0%	21.0%	21.3%	22.5%	0.0%	8.0%
All Roads	% where maintenance should be considered	13.6%	13.7%	13.5%	14.1%	11.7%	11.1%	0.0%	6.4%
Kerbing	% where replacement should be considered	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	0.0%	5.0%
Drainage	% where replacement should be considered	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	0.0%	5.0%
Road Markings	% where replacement should be considered	50.0%	55.0%	55.0%	55.0%	55.0%	55.0%	0.0%	10.0%
Footways	% structurally unsound	26.4%	24.1%	22.8%	21.5%	20.9%	22.5%	0.0%	5.0%
Structures	Bridge Condition Index – Principal roads	88.3	83.8	80.0	80.7	81.1	82.0	100.0	95.0
	Bridge Condition Index – Non-Principal Roads	86.4	83.7	81.0	79.9	80.1	81.0	100.0	95.0

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	Other (using form of Bridge Condition Index)	66.0	66.0	66.0	66.0	66.0	66.0	100.0	85.0
Street Lighting	% columns > 40 years	17.7%	14.9%	15.3%	13.3%	13.9%	14.1%	0.0%	5.0%
	% lanterns > 20 years	45.9%	25.8%	18.3%	15.8%	15.3%	15.4%	0.0%	5.0%
	% lit signs where replacement should be considered	20.0%	17.9%	17.1%	17.1%	17.1%	17.1%	0.0%	5.0%
Traffic Management	No. sites > 15 years	22	19	19	19	19	19	0	10
Street Furniture									
Safety fencing	% where replacement should be considered	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	5.0%
Bollards	% where replacement should be considered	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	0.0%	5.0%
Salt/grit bins	% where replacement should be considered	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	0.0%	5.0%
Unlit Signs									
Road signs	% where replacement should be considered	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	0.0%	5.0%
Street Name Plates	% where replacement should be considered	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	0.0%	5.0%
PROW signs	% where replacement should be considered	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	5.0%

*last years data has been used due to issues with obtaining current values

- 3.2 The good condition target represents where the maintenance backlog will be zero with no defects. This is an ideal theoretical target which is not realistic in practice.
- 3.3 The fair condition target represents a realistic target of acceptable condition subject to available funding.

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3.4 **Department for Transport Statistics**

3.4.1 The condition of local roads is reported to and monitored nationally by the Department for Transport (DfT). The latest results published on 3 October 2019 for 2018/19 can be found at the following link:

<https://www.gov.uk/government/statistics/road-conditions-in-england-to-march-2019>

3.4.2 The results allow comparisons to be made between local Authorities across England and are summarised in Appendix 3 – Condition Benchmarking.

3.4.3 The key findings are that:

- DCC A Roads are slightly better than the national average condition (Rank 64/149);
- DCC B and C Roads are slightly better than the national average (Rank 65/148); and
- DCC Unclassified Roads are worse than the national average (Rank 101/119).

3.4.4 Due to the pressures and resource challenges faced by local authorities, the DfT decided to delay data collection for 2019/20. It is now planned that they will collect two years worth of data (2019/20 and 2020/21) together in Spring 2021.

3.5 **Conclusions**

3.5.1 The overall condition of the A, B, and C principal roads is good, stable and slightly better than the national average.

3.5.2 The condition of unclassified roads remains a key issue and the condition has declined slightly over the past year. The condition is worse than the national average.

3.5.3 The condition of footways is showing a gradual improvement but still remains a key issue.

4. **Maintenance Backlog**

4.1 The maintenance backlog is the value of programmed capital maintenance required to bring the highway asset up to good condition.

4.2 The method of calculation is as follows:

Asset	Description
Carriageway	The nationally accredited UK Pavement Management System (UKPMS) software system identifies the appropriate treatment for each 100m section of carriageway/footway.

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	<p>UKPMS selects A, B and C classified carriageway surveyed by SCANNER in a Red condition for treatment but also some sections in an Amber and Green condition where it is justified on asset management principles.</p> <p>Unclassified roads are surveyed by Coarse Visual Inspection (CVI) and processed in a similar manner to that of Scanner via the UKPMS system.</p>
Footway	A Footway Network Survey (FNS) has been adopted whereby the condition of the surface is assessed into four conditions, 1 being 'as new', and 4 being 'structurally unsound'. This data can be put into UKPMS to identify the appropriate treatment and calculate required financial data.
Kerbing	The maintenance backlog is the % requiring replacement multiplied by the inventory and the unit rate.
Drainage	The maintenance backlog is the % requiring replacement multiplied by the inventory and the unit rate.
Road Markings	The maintenance backlog is the % requiring replacement multiplied by the inventory and the unit rate.
Structures	The backlog is calculated by completing a manual analysis of the Bridge Condition Indicator (BCI) and the routine inspection data, assessing each individual components needs and applying a unit rate to each. The cost of any overdue inspections, the renewal of individual components in excess of their useful life and upgrading of any underperforming structures is included.
Street Lighting	<p>Number of columns > 40 years</p> <p>Number of luminaries > 20 years</p> <p>Lit signs - maintenance backlog is the percentage requiring replacement multiplied by the inventory and the unit rate.</p>
Traffic Management	Number of sites > 15 years
Street Furniture	The maintenance backlog is the % requiring replacement multiplied by the inventory and the unit rate.
Safety Fencing	
Bollards	
Salt/grit bins	
Unlit signs	
Road signs	
Street Name Plates	
PROW signs	

4.3 The maintenance backlog as at 31 March 2020 is summarised as follows:

	Units	Adopted		Unadopted		Total	
		Amount	£M	Amount	£M	Amount	£M
Carriageways							
Strengthen	Km	73.1	6.1	50.8	24.4	123.9	30.5
Resurface	Km	231.9	15.6	15.4	1.4	247.3	17.0

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Surface Improvement	Km	1,017.6	28.4	19.3	0.4	1,036.9	28.8
Edge Improvement	Km	24.2	2.2	0.0	0.0	24.2	2.2
Sub-Total		1,346.8	52.3	85.5	26.2	1,432.3	78.5
Kerbing	Km	460.6	18.4	20.7	0.7	481.3	19.1
Drainage	Number	11,063.3	5.6	524.0	0.2	11,587.3	5.8
Road Markings	Km	1,256.8	0.9	50.0	0.1	1,306.8	1.0
Footways							
Reconstruction	Km	71.0	5.3	11.3	2.5	82.3	7.8
Overlay/Relay/ Flagging	Km	292.2	5.1	26.5	0.5	318.7	5.6
Repair/Relay	Km	892.5	20.5	26.5	0.5	919.0	21.0
Surface improvement	Km	638.7	4.0	110.5	0.5	749.2	4.5
Sub-Total		1,894.4	34.9	174.8	4.0	2,069.2	38.9
Structures	Number	969.0	38.8*	479.0	9.7	1,448.0	48.5
Street Lighting							
Column replacements	Number	9,649.0	11.8	0	0	9,649.0	11.8
Luminaire replacements	Number	11,917.0	4.1	0	0	11,917.0	4.1
Lit signs	Number	971.4	1.3	0	0	971.4	1.3
Sub-Total		22,537.4	17.2	0	0	22,537.4	17.2
Traffic Management							
Replacements	Number	19.0	1.0	0.0	0.0	19.0	1.0
Street Furniture							
Safety fencing	Km	3.2		0		3.2	
Seats, litter bins etc.	Number	10,759.3	2.1	430.0	0.1	11,150.9	2.9
Total	-	-	171.2	-	41.0	-	212.2

*estimated due to issues with obtaining current values

4.4 The maintenance backlog for the adopted highway over the past 7 years is summarised as follows:

Maintenance Backlog	31 March £Millions						
	2014	2015	2016	2017	2018	2019	2020
Carriageways							
Strengthen	19.6	16.0	13.0	9.1	5.7	5.5	6.1
Resurface	36.4	31.6	27.5	22.0	16.1	12.1	15.6
Surface Improvement	7.8	8.8	13.0	18.5	27.6	31.4	28.4
Edge Improvement	3.0	2.8	3.8	3.2	3.3	2.6	2.2
Sub-Total	66.8	59.2	57.3	52.8	52.7	51.6	52.3
Kerbing	20.2	18.4	18.5	18.5	18.5	18.5	18.4
Drainage	5.8	5.6	5.6	5.6	5.6	5.6	5.6
Road Markings	0.5	0.9	0.9	0.9	0.9	0.9	0.9
Footways							

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Reconstruction	24.9	25.9	21.7	17.4	16.3	5.8	5.3
Overlay/Relay/Flagging	7.0	6.4	6.2	5.6	5.7	5.2	5.1
Repair/Relay	11.1	11.8	17.0	19.0	15.5	20.1	20.5
Surface improvement	4.0	3.6	2.6	2.8	3.0	4.1	4.0
Sub-Total	47.0	47.7	47.5	44.8	40.5	35.2	34.9
Structures	9.9	22.4	36.0	42.0	40.6	40.6	38.8*
Street Lighting							
Column replacements	11.0	14.7	12.5	12.7	11.3	11.6	11.8
Luminaire replacements	10.9	7.5	8.3	5.3	4.6	4.3	4.1
Lit sign replacements	1.4	1.3	1.3	1.2	1.2	1.3	1.3
Sub-Total	23.3	23.5	22.1	19.2	17.1	17.2	17.2
Traffic Management	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Street Furniture	2.4	2.4	2.8	2.8	2.8	2.8	2.1
Total	177.0	181.1	191.7	187.6	179.7	172.6	171.2

*estimated due to issues with obtaining current values.

4.5 In recent years, the maintenance backlog has steadily decreased, this is due in part to the investment made in carriageways and footways resurfacing.

4.6 Nearly every Local Highway Authority has a highway maintenance backlog apart from those that have received extra funding from the Government to undertake Highway Maintenance PFI Projects to clear their maintenance backlogs.

4.7 The maintenance backlog should be considered in the context of the overall value of the highway asset.

4.8 Durham County Council's backlog is broadly in line with other Councils based on the latest Annual Local Authority Road Maintenance (ALARM) Survey 2021 which estimates the backlog for England and Wales at £10.24 billion for carriageways and footways. The ALARM Survey can be found at the following link:

<http://www.asphaltuk.org/alarm-survey-page/>

4.9 The Public Right of Way network is not routinely surveyed and we do not have detailed condition data covering the many assets on this network. However, we appreciate that this is an area that requires a system of routine inspections and the development of a Rights of Way Improvement Plan.

5. Public Satisfaction

5.1 The Council participates in the National Highways & Transportation (NHT) Public Satisfaction Survey which is undertaken by IPSOS/MORI. The details of the survey can be found at the following link:

<http://www.nhtnetwork.org/nht-public-satisfaction-survey/findings/>

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5.2 The results are summarised as follows:

Key Benchmark Indicator (KBI)	% Public Satisfied (Year)							
	2009	2010	2011	2012	2014	2016	2018	2020
Overall								
<i>KBI 01 - Overall (local)</i>								
Durham County Council	57.9	55.9	54.6	58.4	57.0	58.0	57.0	55.0
North East	58.7	57.8	55.5	57.9	57.5	57.0	56.0	54.0
National Average	56.2	56.2	55.4	55.9	55.3	55.0	53.0	54.0
<i>KBI 02 - Overall (national)</i>								
Durham County Council	57.8	55.8	54.4	58.3	57.0	58.0	57.0	55.0
North East	58.6	57.7	55.4	57.8	57.4	57.0	56.0	54.0
National Average	56.2	56.2	55.4	55.9	55.3	55.0	53.0	54.0
Highway Maintenance								
<i>KBI 23 - Condition of highways</i>								
Durham County Council	45.1	37.5	33.8	37.7	38.2	45.0	38.0	41.0
North East	46.6	40.3	32.6	38.4	37.5	41.0	33.0	36.0
National Average	42.8	38.6	34.7	36.6	34.4	38.0	31.0	36.0
<i>KBI 24 - Highway maintenance</i>								
Durham County Council	55.1	48.3	46.2	47.8	49.4	55.0	53.0	51.0
North East	54.8	50.7	47.0	49.1	49.4	53.0	51.0	50.0
National Average	52.1	50.2	49.3	49.0	49.4	53.0	51.0	50.0
<i>KBI 25 - Street lighting</i>								
Durham County Council	72.8	70.6	70.6	72.9	69.7	65.0	62.0	60.0
North East	72.9	72.6	70.8	71.1	70.3	68.0	67.0	64.0
National Average	68.1	68.8	68.2	67.4	66.9	66.0	65.0	64.0
<i>KBI 26 - Highway enforcement/obstructions</i>								
Durham County Council	51.9	47.9	49.3	49.8	47.7	50.0	51.0	47.0
North East	52.2	51.0	50.3	51.0	48.5	50.0	50.0	45.0
National Average	50.6	50.5	52.2	50.4	48.2	49.0	49.0	45.0

5.3 The Council did not participate in 2008, 2013, 2015 or 2017. The Council agreed in 2012 to participate on a bi-annual basis.

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5.4 The results above show that there is low satisfaction with the condition of the highway nationally and across the North East. However, the results for 2020 for five of the six indicators show Durham to be above both the regional and national averages.

6. Customer Feedback

6.1 The customer feedback in terms of service requests, complaints, compliments and suggestions received is summarised as follows:

Customer Feedback		Year Ending 31 March 2020	
		Number	Responded within Target %
Service Requests	Category 1 Safety Defects	9,578	92%
	Category 2.1 Safety Defects	42,296	96%
	Category 2.2 Safety Defects	7,065	96%
	Category 2.3 Safety Defects	7,783	88%
	Structures	120	N/A
	Street Lighting	5,671	96%
	Winter Maintenance	2,793	100%
	Flooding	2,226	100%
	Traffic	1,227	100%
	Network Management	578	N/A
Complaints - Service Review	Number investigated	162	57%
	Fully upheld	94	
	Partially upheld	26	
	Not upheld	42	
Complaints - Independent Investigation	Number investigated	10	50%
	Fully upheld	0	
	Partially upheld	4	
	Not upheld	6	
Compliments and Suggestions	Compliments	88	N/A
	Suggestions	37	N/A

6.2 The above is also monitored through the Council's quarterly performance reports which are available on our website at the following link:

<http://www.durham.gov.uk/article/2427/Quarterly-reports>

6.3 Service requests are responded to in accordance with the service levels set out in our Highway Maintenance Plan and Winter Maintenance Plan.

6.4 Complaints are considered in line with the Council's Complaints Policy.

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6.5 The Council also participates in the National Highways and Transportation Public Satisfaction Survey as detailed in Section 5.

6.6 Highway officers provide regular updates to Councillors and Area Action Partnerships who also provide feedback. All this customer feedback helps inform the Transport Asset Management Plan including investment levels and priorities.

7. Performance

7.1 The performance against the objectives set out in TAMP Section 1 - Policy is as follows:

Primary Objectives	Secondary Objectives	Performance Measure	Year Ending 31 March						
			2014	2015	2016	2017	2018	2019	2020
Safety	Complying with statutory obligations	Public liability claims repudiation rate	95%	94%	93%	92%	94%	95%	95%
	Meeting user's needs for safety	Completion of Highway Safety Inspections	100%	100%	100%	100%	100%	100%	100%
		Response to Category 1 and 2 safety defects (Target 95%)	Cat1 75%	Cat1 95%	Cat1 92%	Cat1 92%	Cat1 92%	Cat1 93%	Cat1 93%
Serviceability	Ensuring availability	Effective Streetworks Licensing system to minimise number of unplanned utility overruns	<1%	< 1%	<1%	<1%	<1%	<1%	<1%
		Achieving integrity	See Table 3.1						
	Maintaining reliability	NHT Public Satisfaction Survey	See Table 5.2						
	Enhancing condition	Programmed maintenance	See Table 9.4						
	Sustainability	Minimising whole life costs	Lifecycle plans	See Appendix 2					
Maximising value to the community		Not quantifiable	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	Minimising environmental impact	Maintaining accreditation/compliance with ISO 14001 Environmental Management Gully cleansing	Achieved 98% of all road gullies cleansed as part of the annual programme
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8. Valuation

- 8.1 The Code of Practice on Local Authority Accounting in the United Kingdom requires that the adopted highway is included in the Council's Financial Statements as a fixed asset in the balance sheet. This is part of the Government's Whole of Government Accounts (WGA) initiative to align with International Financial Reporting Standards (IFRS).
- 8.2 The benefit of including the adopted highway as an asset in the financial statements is that it informs stakeholders of the true cost of holding and maintaining the asset which in turn supports good asset management.
- 8.3 The asset is included within the financial statements at depreciated Replacement Cost (DRC). Depreciated replacement cost is a method of valuation that provides the current cost of replacing an asset with its modern equivalent asset (gross replacement cost), less deductions for all physical deterioration and impairment (accumulated depreciation).
- 8.4 The difference between the gross and depreciated cost is the cost of restoring the asset from its present condition to 'as new'.
- 8.5 The condition of assets with a finite economic life will deteriorate each year due to the wearing out and using up of the asset. The deterioration of assets such as carriageways and footways may be accelerated where episodes of severe weather are greater than average.
- 8.6 Annual depreciation is calculated by identifying all the capital treatments needed to maintain assets or key components over their life cycles and then spreading the total cost evenly over the number of years in the life cycle. Calculated in this way, annual depreciation not only represents the annual consumption of economic benefits embodied in the asset but also provides a measure of what on average needs to be spent year on year on programmed maintenance to maintain the assets in a steady state.
- 8.7 The valuation as at 31 March 2020 is as follows:

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Asset – Adopted Highway	£ Millions							
	Carriageway	Footway	Street Lighting	Structures	Traffic Management	Street Furniture	Land	Total
Gross Replacement Cost								
B/F 1 April 2019	4,141.0	799.1	144.1	428.3	2.8	41.8	2,798.5	8,055.6
Additions								
- Adoptions	4.2	1.9	0.0	0.0	0.0	0.0	1.7	7.8
- Programmed Maintenance	15.9	3.2	1.8	1.9	0.3	0.2	0.0	23.3
- Improvements	0.0	0.0	2.0	2.3	0.3	0.0	0.0	4.6
Revaluation Adjustment	19.9	-2.9	12.5	5.8	-0.6	0.0	17.3	51.8
Disposals	-0.9	-0.7	0.0	-10.0	0.0	0.0	0.2	-11.4
C/F 31 March 2019	4,180.1	500.6	160.4	428.3	2.8	41.8	2,817.7	8,131.7
Accumulated Depreciation								
B/F 1 April 2018	163.5	39.1	85.3	191.4	1.6	25.0	0.0	505.9
Revaluation Adjustment	-13.8	-8.4	6.7	-8.4	0.0	-1.5	0.0	-25.5
Depreciation Charge	16.3	9.2	4.8	18.4	0.1	1.5	0.0	50.3
Disposals	-0.9	-0.7	-1.4	-10.0	0.0	0.0	0.0	-13.0
C/F 31 March 2019	165.1	39.2	95.4	191.4	1.7	25.0	0.0	517.8
Depreciated Replacement Cost								
B/F 1 April 2018	3,977.5	460.0	58.8	236.9	1.2	16.8	2,798.5	7,549.7
Additions	20.1	5.1	3.8	4.2	0.6	0.2	1.7	35.7
Revaluation Adjustment	32.8	4.8	5.8	14.2	-0.6	1.3	17.3	75.6
Depreciation Charge	-16.3	-9.2	-4.8	-18.4	-0.1	-1.5	0.0	-50.3
Disposals	0.9	0.7	1.4	0.0	0.0	0.0	0.2	3.2
C/F 31 March 2019	4,015.0	461.4	65.0	236.9	1.1	16.8	2,817.7	7,613.9

9. Budgets

9.1 The budget for programmed capital maintenance is summarised as follows:

Funding Stream	Year Ending 31 March £'000s										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Department for Transport Funding											
Local Transport Plan	10,679	10,132	9,780	11,886	10,896	10,567	9,564	9,564	9,564	6,596	6,596*
Challenge Fund	0	0	0	0	0	0	0	0	4,000	0	0
Incentive Fund	0	0	0	0	666	1,016	2,008	1,992	1,992	1,649	1,649*
Section 31	0	1,836	1,007	0	0	0	0	0	0	0	0

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Severe Weather	0	0	1,242	1,100	0	0	0	0	0	0	0
Potholes Fund	0	0	2,197	0	784	1,580	1,297	662	8,448	6,596	6,596*
Productivity Fund	0	0	0	0	0	1,830	0	0	0	0	0
Additional Highway Maintenance Fund	0	0	0	0	0	0	5,269	0	0	0	0
Sub-Total	10,679	11,968	14,226	12,986	12,346	14,993	18,138	12,218	24,004	14,841	14,841
Durham County Council Funding											
Highway Maintenance	3,012	2,912	5,404	4,811	6,911	9,054	7,486	8,864	10,431	9,100	6,000*
Total	13,691	14,880	19,630	17,797	19,257	24,047	25,624	21,082	34,435	23,941	20,841

*Projected

9.2 The above budget rebased for construction inflation (BCIS Civil Engineering 1990 Series) at 1 April 2017 prices is summarised as follows:

	Year Ending 31 March £'000s										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*
Nominal											
Budget	12,294	13,271	13,691	14,880	19,630	17,797	19,257	24,047	25,624	34,435	25,354
Inflation %	2.01%	3.49%	5.08%	1.40%	2.70%	1.50%	4.20%	3.50%	3.05%	3.00%	3.00%
Index	228.18	236.14	248.13	251.44	258.23	262.10	273.11	282.67	291.29	300.03	309.03
Real 1 April 2017 Prices											
Budget	14,125	14,734	14,466	16,162	20,761	18,544	19,257	23,234	24,025	31,345	22,407

*BCIS Civil Engineering Forecast

9.3 It can be seen that the above outturn spend is significantly less than the annual depreciation charge.

9.4 The above budgets have purchased the following quantities of programmed capital maintenance:

Programmed Capital Maintenance Quantities	Unit	Steady State Condition Benchmark	Year Ending 31 March									
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Carriageways	Km treated	7.0%	122 3.2%	156 4.1%	168 4.4%	165 4.4%	178 4.7%	205 5.4%	213 5.6%	197 5.2%	210 5.5%	150 4.0%
Kerbing	Km treated	2.5%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%	4.8 0.1%
Drainage (Gullies)	No.	2.5%	130 0.1%	130 0.1%	130 0.1%	130 0.1%	130 0.1%	200 0.2%	250 0.2%	250 0.2%	250 0.2%	250 0.2%
Road Markings	Km treated	14.3%	286 12.8%	287 12.8%	285 12.7%	285 12.7%	285 12.7%	285 12.7%	287 12.7%	287 12.7%	287 12.7%	287 12.7%
Footways	Km treated	5.0%	84 2.2%	88 2.3%	108 2.8%	95 2.5%	103 2.7%	122 3.3%	117 3.1%	121 3.2%	117 3.1%	117 3.1%
Structures	No. of bridges treated	5.0%	66 6.9%	50 5.2%	26 2.7%	26 2.7%	46 4.8%	47 4.9%	47 4.9%	47 4.9%	47 4.9%	47 4.9%
Street lighting	No. columns replaced	2.5%	836 1.3%	841 1.3%	802 1.2%	830 1.3%	2,213 3.4%	1,040 1.7%	954 1.6%	1,000 1.6%	1,000 1.6%	1,000 1.6%
	No. luminaires replaced	5.0%	7,423 8.9%	8,137 9.8%	11,971 14.4%	12,302 14.8%	11,904 14.3%	12,006 14.4%	2,918 3.5%	1,500 1.8%	1,500 1.8%	1,500 1.8%

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	No. lit signs replaced	2.5%	100 1.8%	100 1.8%	100 1.8%	105 1.8%	105 1.8%	105 1.8%	105 1.8%	106 1.8%	106 1.8%	106 1.8%
Traffic Management		6.7%	3 2.1%	2 1.4%	1 0.7%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.4%	2 1.4%
Street Furniture	Items replaced	3.2%	2,099 2.2%	2,300 2.4%	1,550 1.6%	2,010 2.1%	1,680 1.7%	1,603 1.7%	1,605 1.7%	1,607 1.7%	1,621 1.7%	1,700* 1.8%

*estimated

9.5 It can be seen that the quantity of programmed capital maintenance purchased is less than the steady state condition benchmark and this explains why the condition of the highway asset has deteriorated over the period.

10. Investment Levels

10.1 The TAMP measures the current and projected condition of the asset for a given level of investment in programmed capital maintenance.

10.2 A range of investment levels (condition or budget led) are provided to allow stakeholders to select the most appropriate investment level to meet their objectives within available budgets.

10.3 We have modelled the following investment levels as stated in the policy:

Investment Level – Programmed Capital Maintenance	1 April 2017 Prices (£ millions)		
	One Off Capital Cost	Annual Average Capital Cost	Annual Average Capital Cost (Once Backlog Cleared)
Projected Budget	N/A	£17.8	N/A
Steady State Condition	N/A	£20.8	N/A
Eliminate highway maintenance backlog over 1 year then maintain at steady state condition	£171.2	N/A	£20.3
Eliminate highway maintenance backlog over 30 years then maintain at steady state condition	N/A	£27.9	£20.3

10.4 It is assumed that budgets will be uplifted for inflation to maintain purchasing power at 1 April 2017 prices.

10.5 The Projected Budget is an indicative annualised figure and the actual budgets may be greater or less depending upon Department for Transport and Council funding.

10.6 The above does not take account of any growth in the inventory from new developments which will increase the above values.

10.7 The projected condition and maintenance backlog for the Projected Budget service level is provided in Appendix 2.

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10.8 The investment levels are calculated using nationally accredited lifecycle planning models which are based on current condition projected forward for average annual deterioration over a period of 30 years. In the short term the annual movements in the maintenance backlog are affected by:

- Inflation;
- Annual variations in deterioration due to the severity of the weather;
- Cycle for collecting condition data which is up to 6 years; and
- The accuracy of the nationally accredited deterioration model when applied to County Durham.

10.9 If investment is less than the steady state condition investment level then in the medium term:

- The condition of the highway asset will deteriorate;
- The maintenance backlog will increase;
- The number of defects will increase and put pressure on the reactive and routine revenue maintenance budgets;
- The number of public liability claims will increase and put pressure on the insurance budget; and
- Public satisfaction will decrease.

10.10 If investment is more than the steady state condition investment level then in the medium term:

- The condition of the highway asset will improve;
- The maintenance backlog will reduce;
- The number of defects will reduce;
- The number of public liability claims will reduce; and
- Public satisfaction will improve.

11. Feedback

11.1 The Council welcomes feedback on any aspect of this TAMP. If you would like to provide feedback please provide via Customer Services using the following contact details:

- Website: www.durham.gov.uk
- Email: help@durham.gov.uk
- Telephone number: 03000 260000

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Appendix 1 - Inventory Summary

Adopted Highway	Unit	Year Ending 31 March										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Carriageways												
A Roads	Km	416	416	416	416	416	415	415	415	415	414	415
B Roads	Km	407	407	407	407	406	406	406	406	403	406	406
C Roads	Km	698	698	697	697	697	697	697	696	696	693	695
Unclassified	Km	2,200	2,212	2,224	2,236	2,255	2,262	2,276	2,279	2,280	2,283	2,287
Sub-Total	Km	3,721	3,733	3,744	3,756	3,774	3,780	3,794	3,796	3,797	3,793	3,803
Kerbing	Km	4,462	4,478	4,493	4,539	4,573	4,588	4,605	4,611	4,612	4,606	4,606
Drainage												
Gullies	Number	105,034	105,428	105,805	107,488	108,340	110,054	110,462	110,606	110,750	110,633	110,633
Ditches	Km	262	262	262	262	262	262	262	262	263	263	263
Pipework	Km	358	359	360	365	368	376	377	377	378	378	378
Road Markings												
Lines	Km	2,237	2,241	2,240	2,243	2,242	2,242	2,250	2,253	2,287	2,285	2,285
Other items	Number	20,035	20,085	20,129	22,167	22,271	22,271	22,331	22,360	23,072	23,048	23,048
Footways	Km	3,543	3,600	3,656	3,783	3,837	3,828	3,886	3,719	3,719	3,739	3,752
Structures	Number	1,398	1,399	1,402	1,402	1,402	1,448	1,476	1,473	1,483	1,483	1,483*
Street Lighting	Number	87,173	87,803	88,491	89,008	89,085	88,675	88,504	89,413	88,782	88,160	88,160
Traffic Management	Number	123	127	129	133	136	138	139	142	142	142	142
Street Furniture												
Safety fencing	Km	53	53	53	53	53	53	53	53	53	53	53
Other	Number	90,462	91,560	92,658	93,757	95,320	95,385	94,320	94,436	94,552	95,360	95,689
Land	M ²	30,326,800	30,499,600	30,891,150	31,326,522	31,353,145	30,939,856	31,019,148	30,852,356	30,874,676	30,959,847	30,972,366

*last years data has been used due to issues with obtaining current values.

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Appendix 2 - Projected Condition and Maintenance Backlog

Projected Condition - Asset	Description	Year Ending 31 March															
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
A - Roads	% where maintenance should be considered	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.9	4.0	4.1	4.2
B – Roads		3.0	3.0	3.0	3.0	3.0	2.8	3.0	3.4	3.9	4.5	5.2	5.9	6.7	7.5	8.3	9.2
C – Roads		2.6	2.6	2.6	2.6	2.6	2.4	2.2	2.5	2.8	3.2	3.7	4.2	4.7	5.3	6.0	6.6
Unclassified Roads	% where maintenance should be considered	22.5	20.6	20.6	20.6	20.6	21.2	21.8	22.5	23.1	23.7	24.3	24.8	25.4	26.0	26.6	27.2
Footways	% functionally/ structurally impaired	21.6	22.2	22.6	22.8	22.9	22.8	22.6	22.4	22.0	21.6	21.1	20.5	19.9	19.3	18.7	18.0
Kerbing	% where replacement should be considered	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5
Drainage	% where replacement should be considered	11.0	11.5	11.9	12.4	12.8	13.3	13.7	14.1	14.6	15.0	15.4	15.8	16.2	16.6	17.1	17.5
Road Markings	% where replacement should be considered	66.0	58.3	56.9	55.9	55.2	54.7	54.3	54.1	54.0	54.0	54.0	54.2	54.3	54.5	54.7	54.9
Structures	Bridge Condition Index – Principal roads	82.0	78.6	81.6	81.6	81.1	80.9	80.2	80.3	79.8	79.1	78.6	77.7	77.7	77.5	77.0	76.6
Structures Street Lighting	Bridge Condition Index – Non-Principal Roads	81.0	81.3	81.3	81.1	81.3	81.0	80.4	81.0	80.7	80.1	79.6	79.8	79.4	78.0	77.5	77.0
	% columns > 40 years	13.9	18.2	16.8	16.6	16.8	16.9	16.9	16.8	16.7	16.6	16.4	16.2	16.0	15.7	15.4	15.1
Street Lighting Traffic Management	% lanterns > 20 years	15.3	22.1	21.1	20.2	19.3	18.4	17.5	16.5	15.6	14.7	13.8	12.9	12.1	11.2	10.3	9.4
	Lit signs	16.8	23.0	24.0	24.9	25.8	26.7	27.6	28.4	29.3	30.1	30.9	31.6	32.4	33.1	33.8	34.5
	% traffic signals > 15 years	19.0	23.5	23.8	24.2	24.6	24.9	25.3	25.8	26.2	26.6	27.1	27.5	28.0	28.4	28.9	29.3
Street Furniture	% where replacement should be considered	8.0	7.9	7.7	7.6	7.4	7.3	7.3	7.2	7.1	7.1	7.0	6.9	6.9	7.0	7.0	7.1
Maintenance Backlog	(£ millions)	171.2	174.2	174.7	175.0	175.5	176.0	176.6	178.8	180.5	182.2	184.0	185.6	187.5	189.3	191.3	193.3

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Appendix 2 - Projected Condition and Maintenance Backlog (Continued)

Projected Condition - Asset	Description	Year Ending 31 March														
		2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
A - Roads	% where maintenance should be considered	4.3	4.5	4.6	4.7	4.8	4.9	5.1	5.2	5.4	5.6	5.8	6.0	6.3	6.6	6.9
B – Roads		10.2	11.1	12.1	13.1	14.2	15.3	16.4	17.5	18.7	19.9	21.2	22.5	23.9	25.4	26.9
C – Roads		7.3	8.0	8.7	9.5	10.2	11.0	11.8	12.7	13.5	14.4	15.3	16.2	17.2	18.1	19.1
Unclassified Roads	% where maintenance should be considered	27.9	28.4	29.0	29.6	30.1	30.6	31.0	31.5	31.9	32.3	32.6	33.0	33.3	33.6	33.9
Footways	% functionally/ structurally impaired	17.4	16.7	16.0	15.3	14.7	14.0	13.4	12.7	12.1	11.5	10.9	10.3	9.8	9.2	8.7
Kerbing	% where replacement should be considered	11.6	11.7	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.7	12.8
Drainage	% where replacement should be considered	17.9	18.2	18.6	19.0	19.4	19.8	20.1	20.5	20.9	21.2	21.6	22.0	22.3	22.7	23.0
Road Markings	% where replacement should be considered	55.1	55.3	55.5	55.7	55.9	56.1	56.3	56.5	56.6	56.8	56.9	57.0	57.2	57.3	57.4
Structures	Bridge Condition Index – Principal roads	75.8	75.0	74.9	75.7	74.1	73.8	71.9	72.6	74.2	73.1	72.1	71.4	71.7	70.3	68.7
Structures Street Lighting	Bridge Condition Index – Non-Principal Roads	75.9	75.5	75.7	75.4	73.7	73.3	71.5	70.1	71.5	70.1	69.5	69.0	69.4	68.2	66.6
	% columns > 40 years	14.9	14.7	14.4	14.1	13.8	13.5	13.1	12.7	12.2	11.8	11.3	10.8	10.3	9.8	9.3
Street Lighting Traffic Management	% lanterns > 20 years	8.6	7.7	6.8	6.0	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1
	Lit signs	35.2	35.9	36.5	37.1	37.8	38.3	38.9	39.5	40.1	40.6	41.1	41.6	42.1	42.6	43.1
	% traffic signals > 15 years	29.8	30.3	30.7	31.2	31.6	32.1	32.5	33.0	33.4	33.8	34.2	34.7	35.1	35.5	35.9
Street Furniture	% where replacement should be considered	7.2	7.4	7.5	7.6	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	9.0	9.1
Maintenance Backlog	(£ millions)	195.4	197.4	199.8	202.3	204.0	206.2	207.8	210.0	213.3	215.2	217.5	220.0	223.3	225.6	228.0

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Appendix 3 - Condition Benchmarking

Measured Road Condition Weighted by Road Length

Road Class	Year Ending 31 March											
	2017			2018			2019			2020		
	Network Lane Length (Km)	Length where maintenance should be considered (Km)	Percentage where maintenance should be considered %	Network Lane Length (Km)	Length where maintenance should be considered (Km)	Percentage where maintenance should be considered %	Network Lane Length (Km)	Length where maintenance should be considered (Km)	Percentage where maintenance should be considered %	Network Lane Length (Km)	Length where maintenance should be considered (Km)	Percentage where maintenance should be considered %
A Roads	719.4	18.0	2.5	719.3	17.6	2.4	719.5	18.7	2.6	719.5	21.9	3.0
B Roads	802.3	26.7	3.3	802.3	35.8	4.5	802.5	35.2	4.4	802.5	24.8	3.1
C Roads	1,289.6	27.7	2.1	1,289.6	36.9	2.9	1,289.6	43.0	3.3	1,289.3	29.4	2.3
U Roads	2,278.9	432.8	19.0	2,280.0	465.1	20.4	2,281.3	550.8	24.1	2,282.9	520.1	22.8
All Roads	5,090.2	505.2	13.3	5,091.2	555.3	10.9	5,092.9	647.7	12.7	5,094.2	596.2	11.7

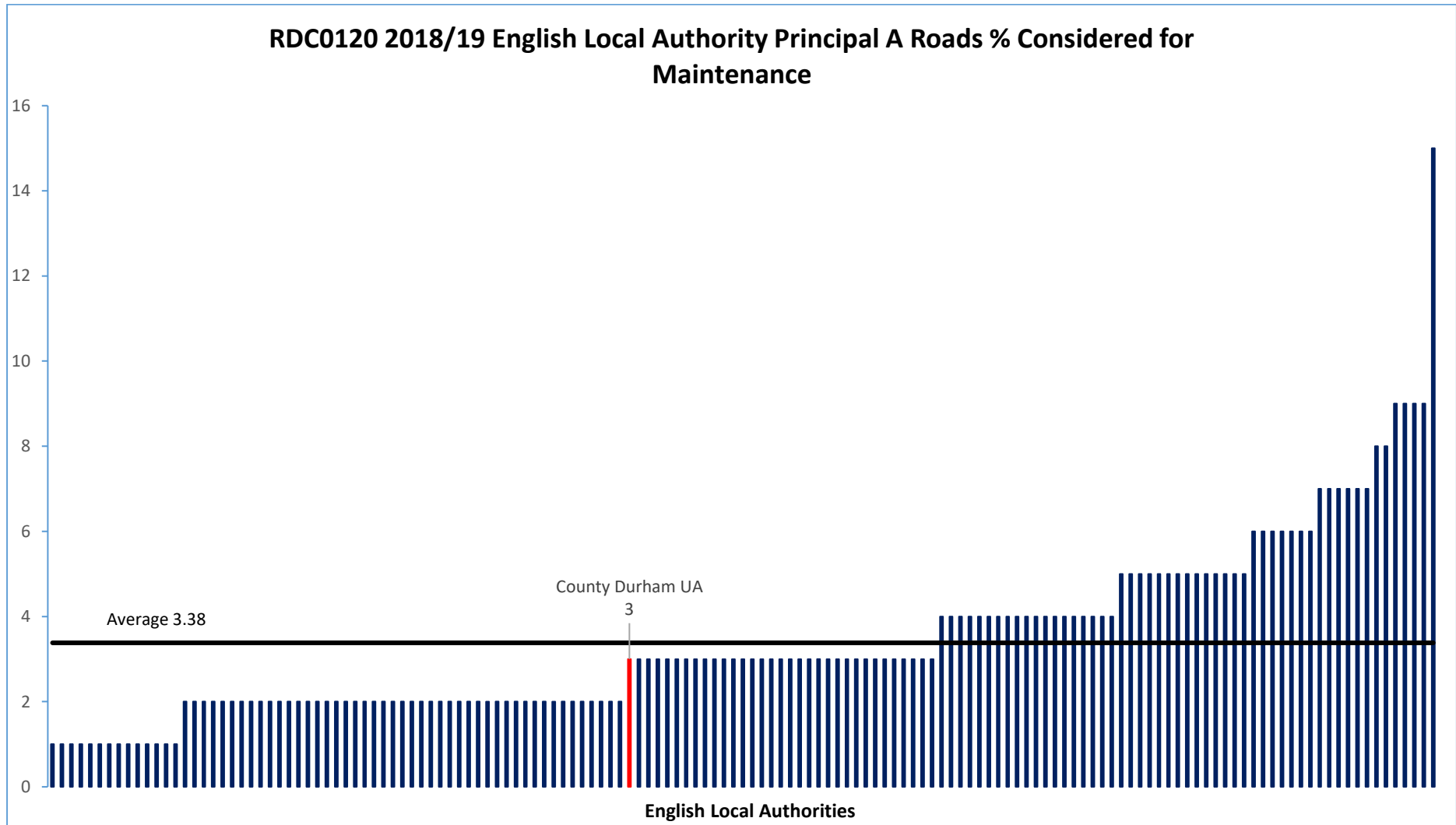
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Department for Transport Statistics

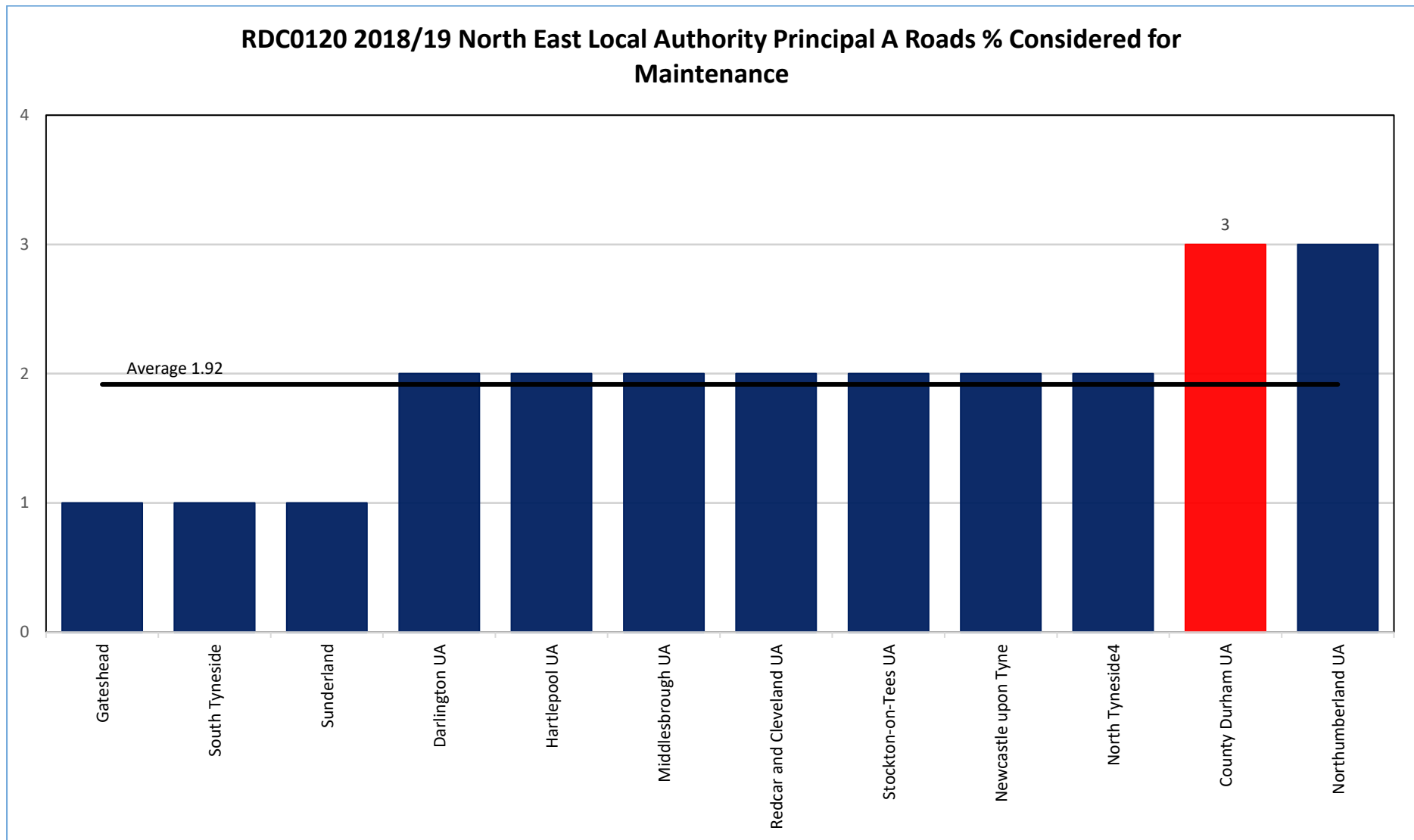
Principal and non-principal classified roads where maintenance should be considered (RDC0120)

Principal (LA maintained 'A' roads)	Year Ending 31 March							
	2012	2013	2014	2015	2016	2017	2018	2019
National								
DCC %	6	6	5	5	4	3	3	3
Average %	5.95	6.16	6.10	3.99	3.81	3.84	3.46	3.38
Mode %	4.00	3.00	2.00	2.00	2.00	3.00	3.00	2.00
Minimum %	1.00	1.00	1.00	1.00	0	1	0	0
Maximum %	21.00	32.00	24.00	13.00	10.00	11.00	11.00	15.00
Number of Returns	146	143	149	147	149	150	148	149
DCC Rank (Low to High)	78	78	76	99	83	47	55	64
North East								
DCC %	6	6	5	5	4	3	3	3
Average %	4.00	3.33	3.33	3.75	2.92	2.17	1.58	1.92
Mode %	3.00	2.00	2.00	2	3.00	2.00	1.00	2.00
Minimum %	2.00	2.00	2.00	2	1	1	1	1
Maximum %	6.00	6.00	5.00	7	6	3	3	3
Number of Returns	12	12	12	12	12	12	12	12
DCC Rank (Low to High)	11	12	9	9	10	9	11	11
Non-principal (LA maintained 'B' and 'C' roads)								
	Year Ending 31 March							
	2012	2013	2014	2015	2016	2017	2018	2019
National								
DCC %	10	9	8	6	4	3	4	4
Average %	8.34	8.34	7.81	6.43	4.89	4.82	4.59	4.57
Mode %	10.00	5.00	3.00	4	5.00	4.00	4.00	4.00
Minimum %	2.00	2.00	1.00	1	1	1	1	0
Maximum %	22.00	26.00	27.00	21	17.00	18.00	22.00	25
Number of Returns	144	143	149	146	149	148	146	148
DCC Rank (Low to High)	95	83	86	70	51	26	55	65
North East								
DCC %	10	9	8	6	4	3	4	4
Average %	7.17	6.25	6.25	5.50	4.58	3.42	2.83	2.83
Mode %	3.00	9.00	8.00	6	4.00	2.00	1.00	1.00
Minimum %	3.00	2.00	2.00	1	1	1	1	1
Maximum %	13.00	12.00	14.00	11	10	8	7	7
Number of Returns	12	12	12	12	12	12	12	12
DCC Rank (Low to High)	9	8	8	7	7	7	9	9

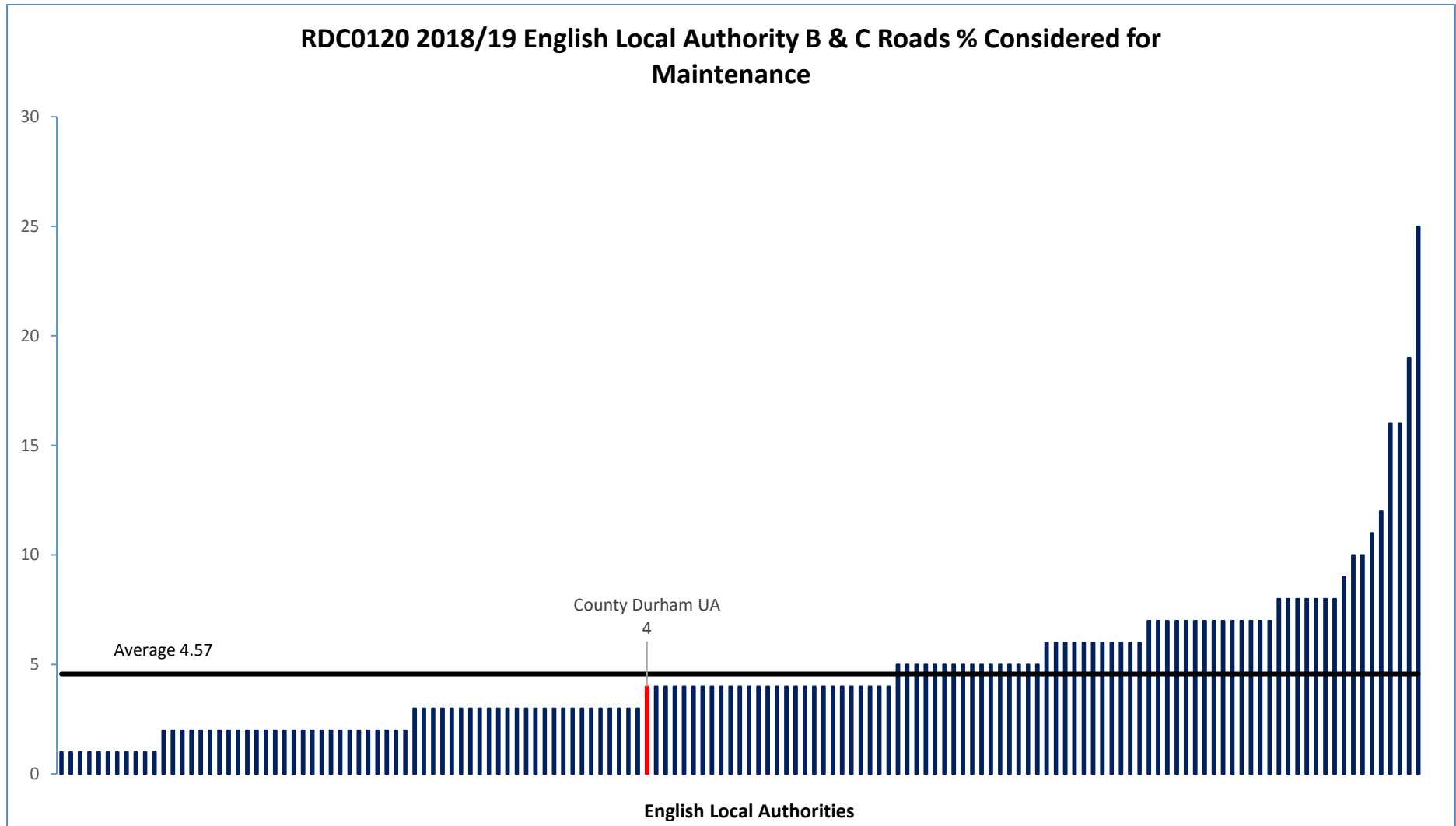
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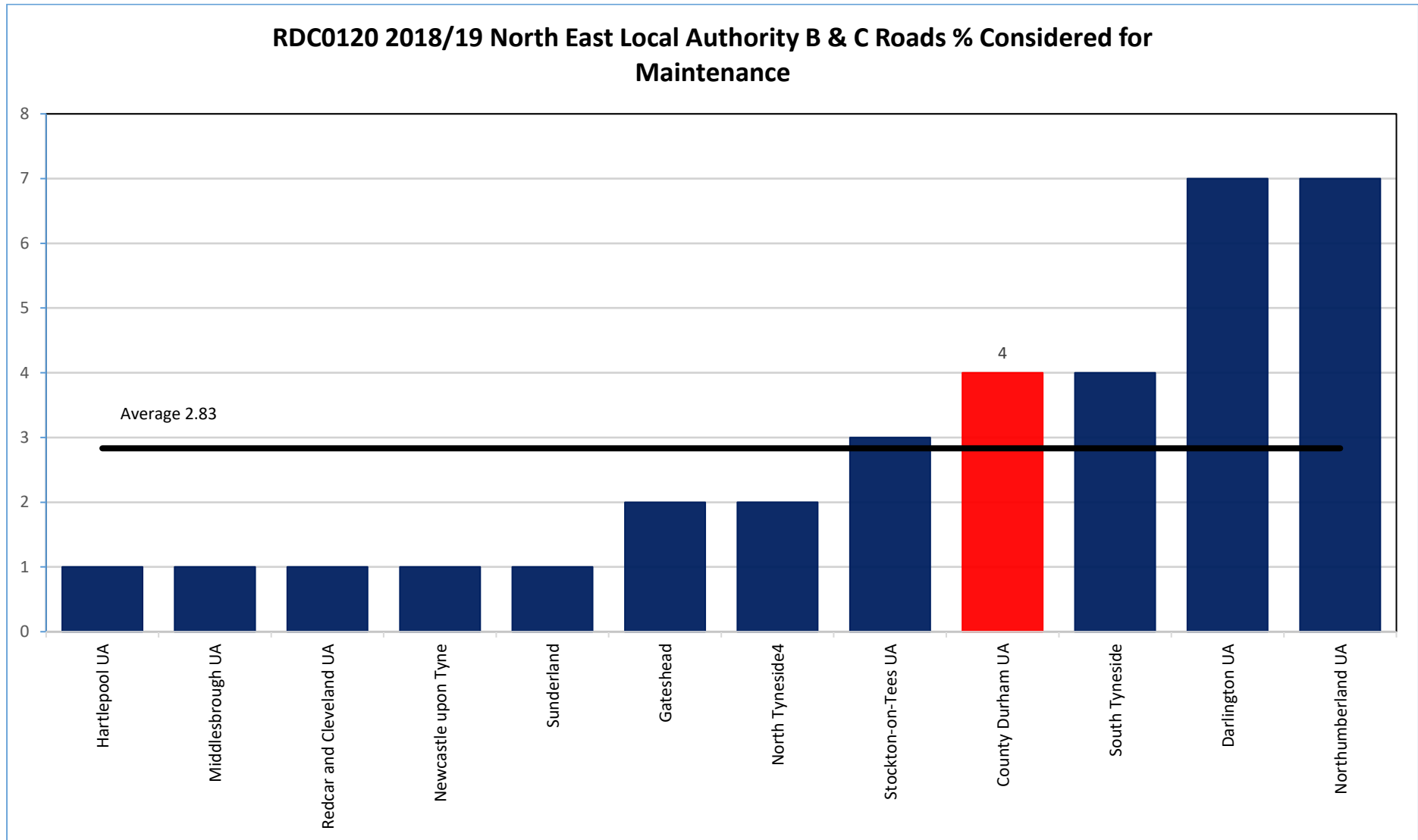
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Appendix 3



Appendix 3

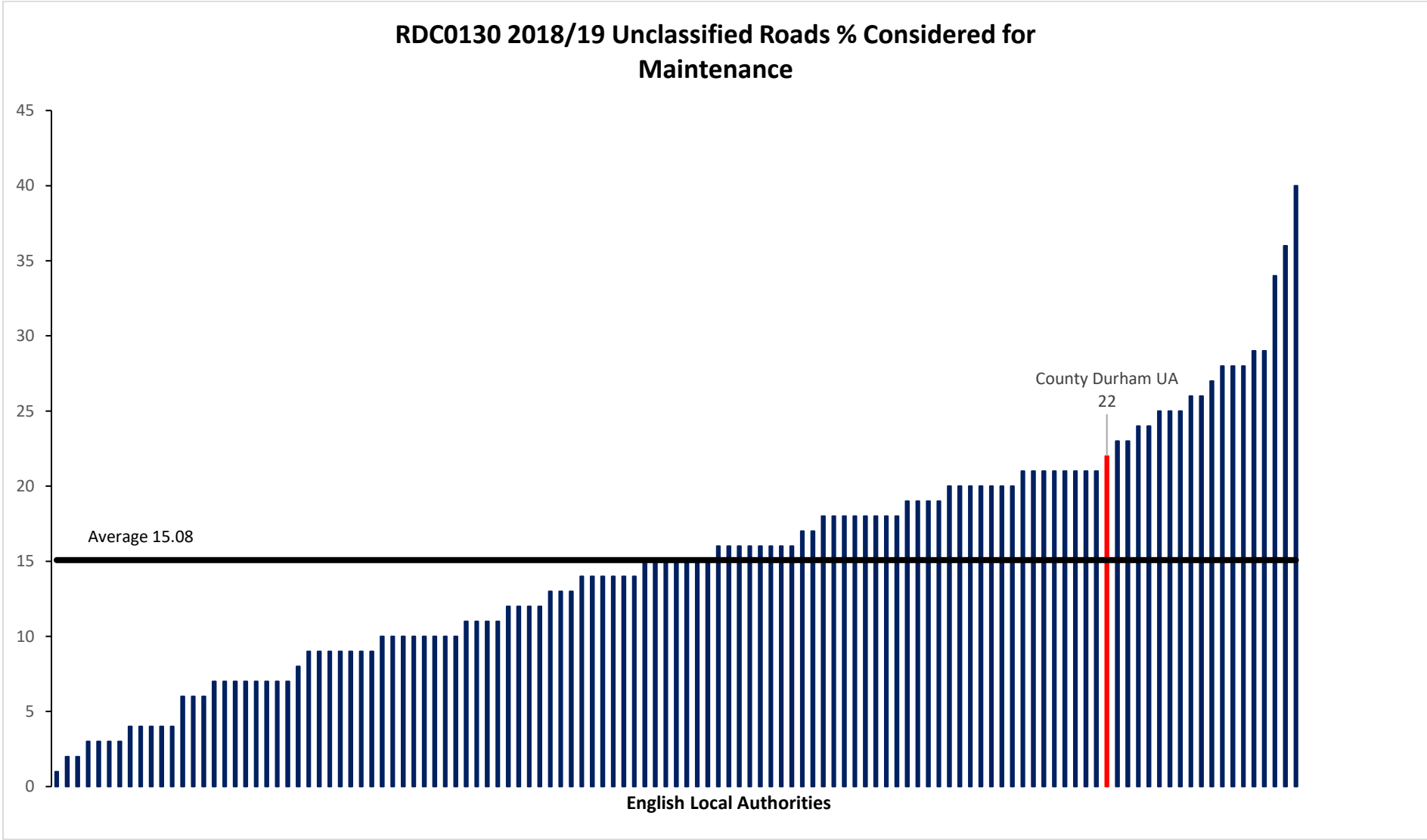
Department for Transport Statistics

Percentage of unclassified roads where maintenance should be considered (RDC0130)

Unclassified Roads	Year Ending 31 March								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
England									
DCC %	17	20	21	22	19	20	20*	21	22
Average %	14.74	15.49	15.81	17.71	16.46	16.13	15.59	14.89	15.08
Mode %	11.00	12.00	7.00	8.00	10.00	12.00	12.00	18.00	16.00
Minimum %	3.00	2.00	3.00	3.00	3.00	2.00	1	1	1
Maximum %	43.00	41.00	45.00	74.00	70.00	75.00	60.00	40.00	40.00
Number of Returns	115	113	112	130	128	129	129	116	119
DCC Rank (Low to High)	74	86	86	96	87	92	91	91	101
North East									
DCC %	17	20	21	22	19	20	20*	21	22
Average %	8.33	9.91	9.91	11.18	11.42	13.50	13.83	15.42	16.25
Mode %	6.00	7.00	7.00	10.00	10.00	12.00	12.00	13.00	16.00
Minimum %	4.00	6.00	7.00	4.00	8.00	10	4	5	4
Maximum %	17.00	20.00	21.00	22.00	19.00	20	20	22	22
Number of Returns	12	11	11	11	12	12	12	12	12
DCC Rank (Low to High)	12	11	11	11	12	12	12	11	12

* Our return to the Department for Transport initially reported 17% but following a review to ensure accuracy and consistency with prior years was revised to 20%

Appendix 3



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