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# Neighbourhood Forums

## Highways Maintenance

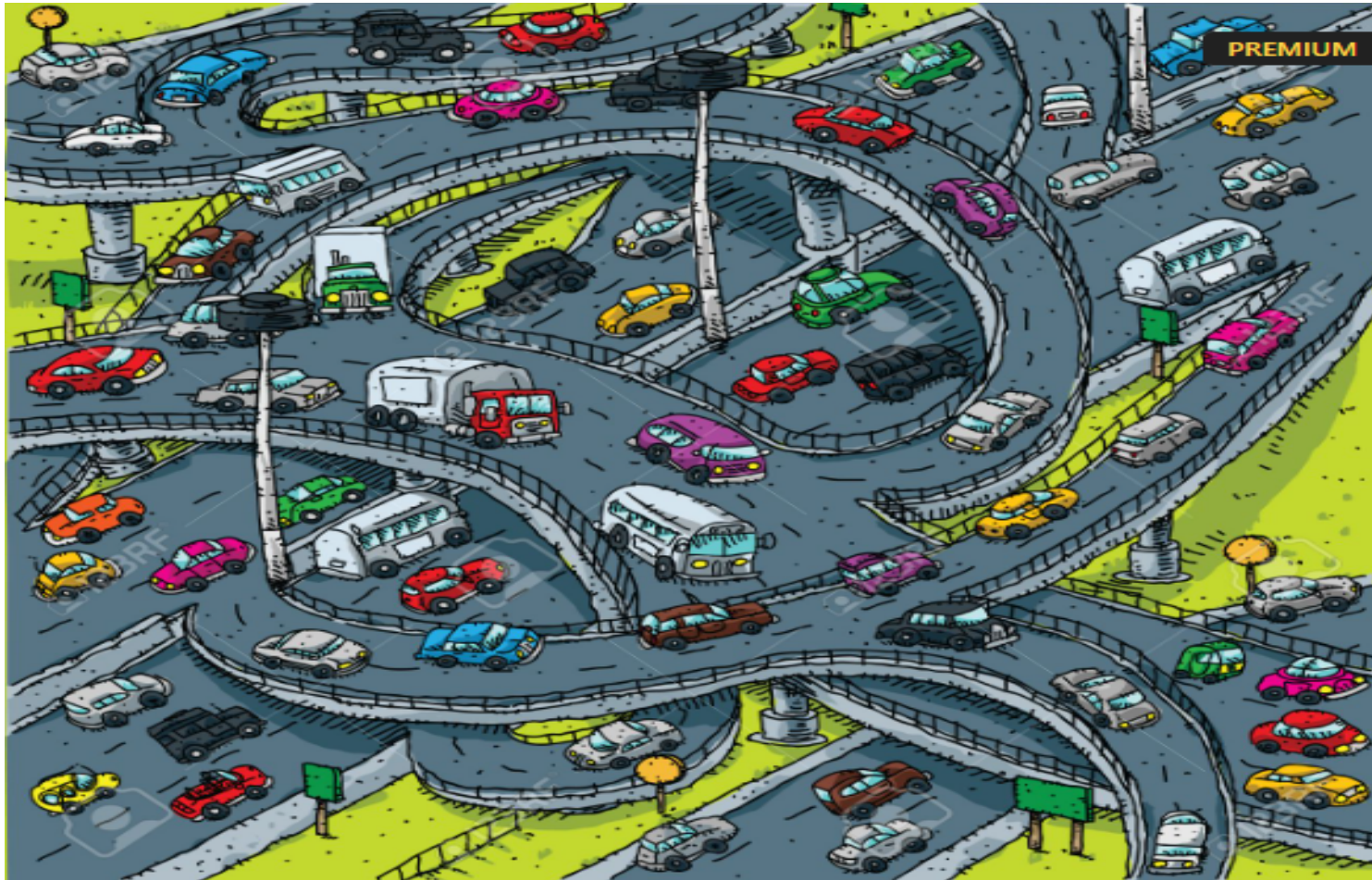
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Lee Holland

Head of Engineering Services

October 2023

# What do we mean by “Highways”



# Tameside's Highway Network

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40 sq. miles / 95,000 properties / 231,000 residents

73km Principal Roads

70km Classified Roads

615Km Unclassified Roads

1,155Km Footways

48,126 Gullies

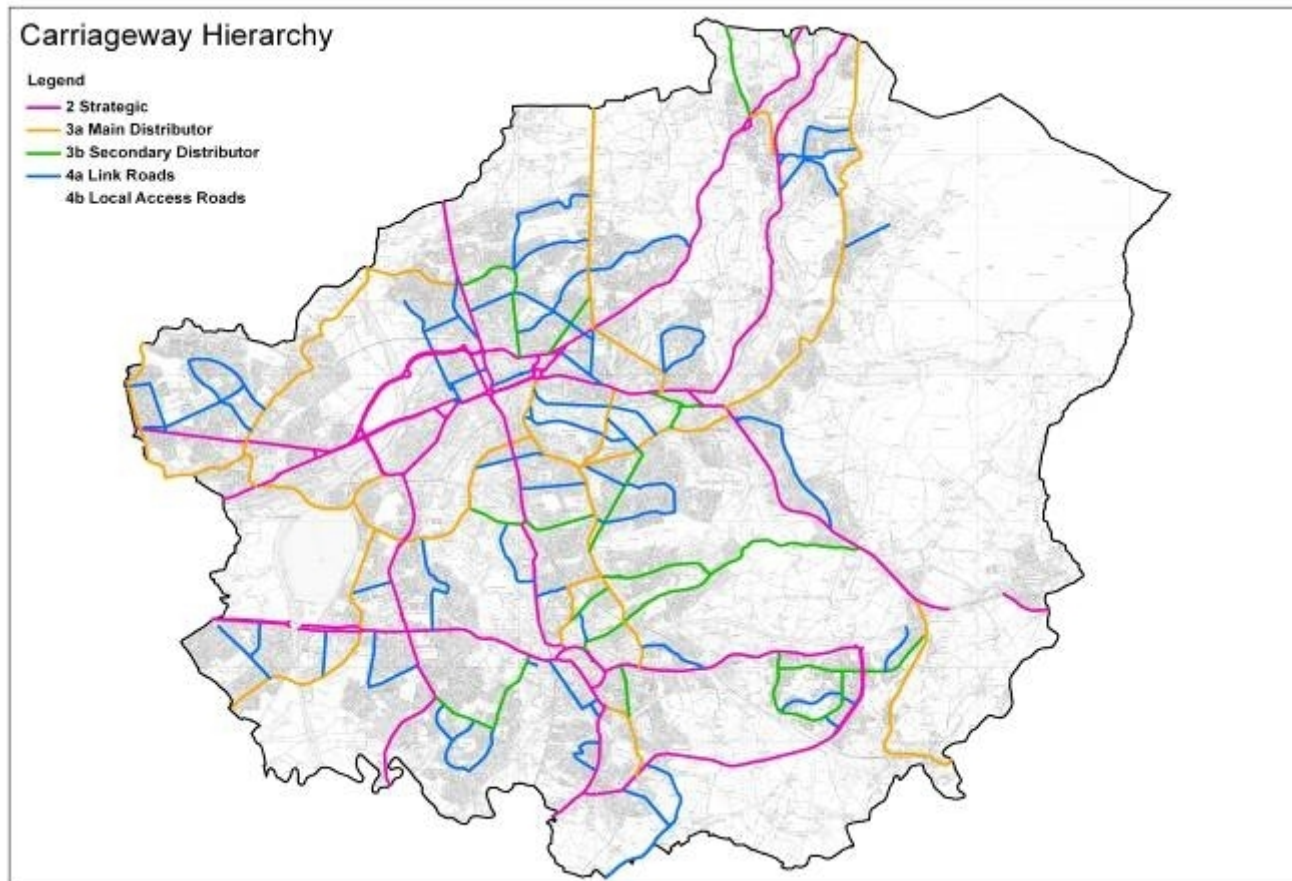
25,341 Street Lighting columns

4,000 Signs (illuminated and non-illuminated)

159 Bridges

304 Retaining Walls / Structures

# Tameside's Highway Hierarchy



Establish maintenance strategies relative to demand / risk

# Asset Valuation for Whole of Government Accounts (WGA)

<u>2022 Return</u>	Gross Replacement		Depreciated Replacement
Asset Type	Cost (£m)	Depreciation (£-m)	Cost (£m)
Carriageways	1,034	78.3	955.7
Footways	254.4	69.8	184.6
Bridges / Structures	363.8	109.3	254.5
Street Lighting	47.1	28.5	18.6
Street Furniture	26.9	18.3	8.6
<b>TOTAL</b>	<b>1,726.2</b>	<b>304.2</b>	<b>1,422.0</b>



## Highway Asset Groups

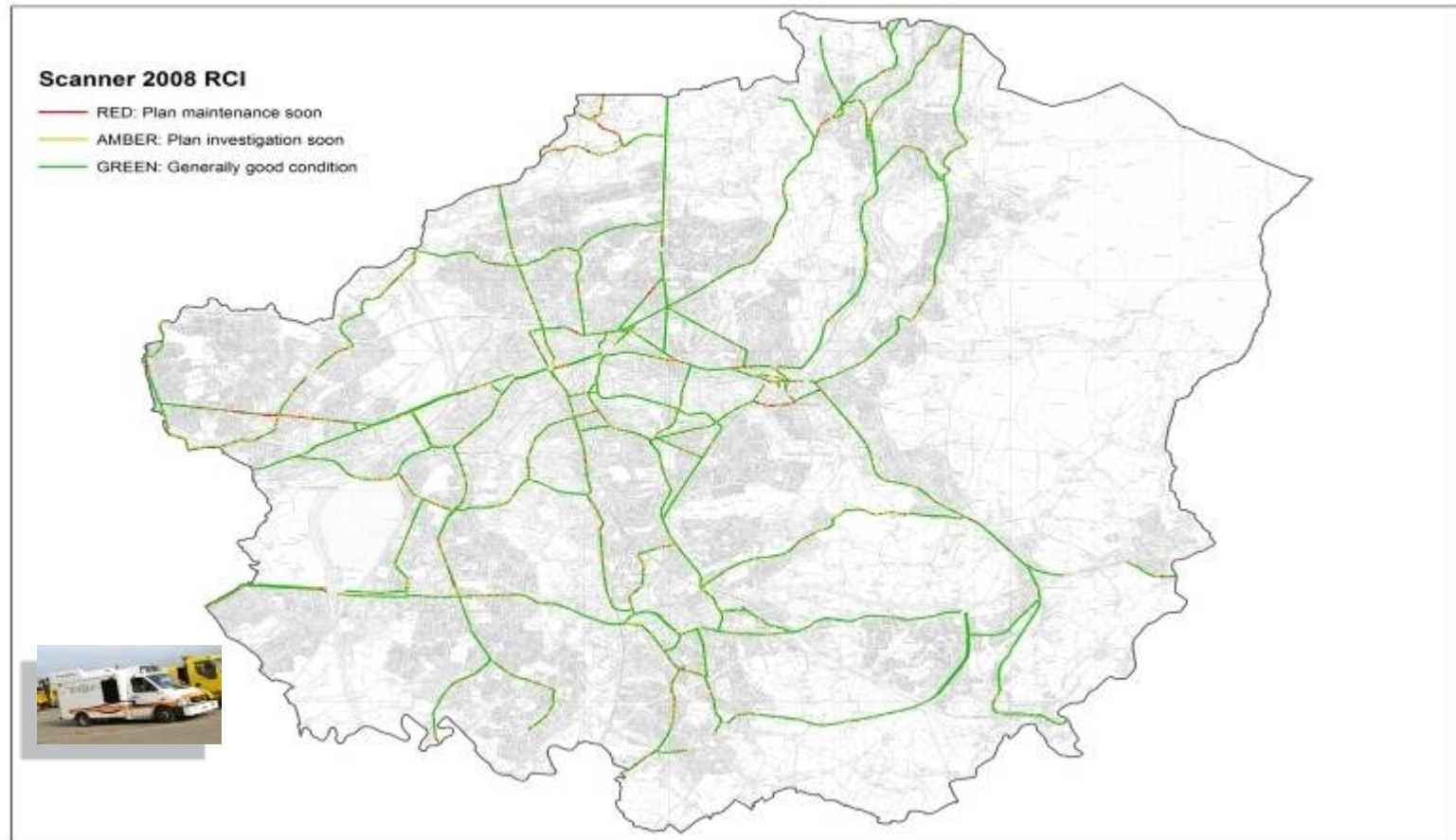
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- Highways (footways, roads and drainage)
- Structures (bridges and retaining walls)
- Street lighting (lighting columns or illuminated signs)
- Winter maintenance (gritting)

# Highway Assets Annual Maintenance Investment

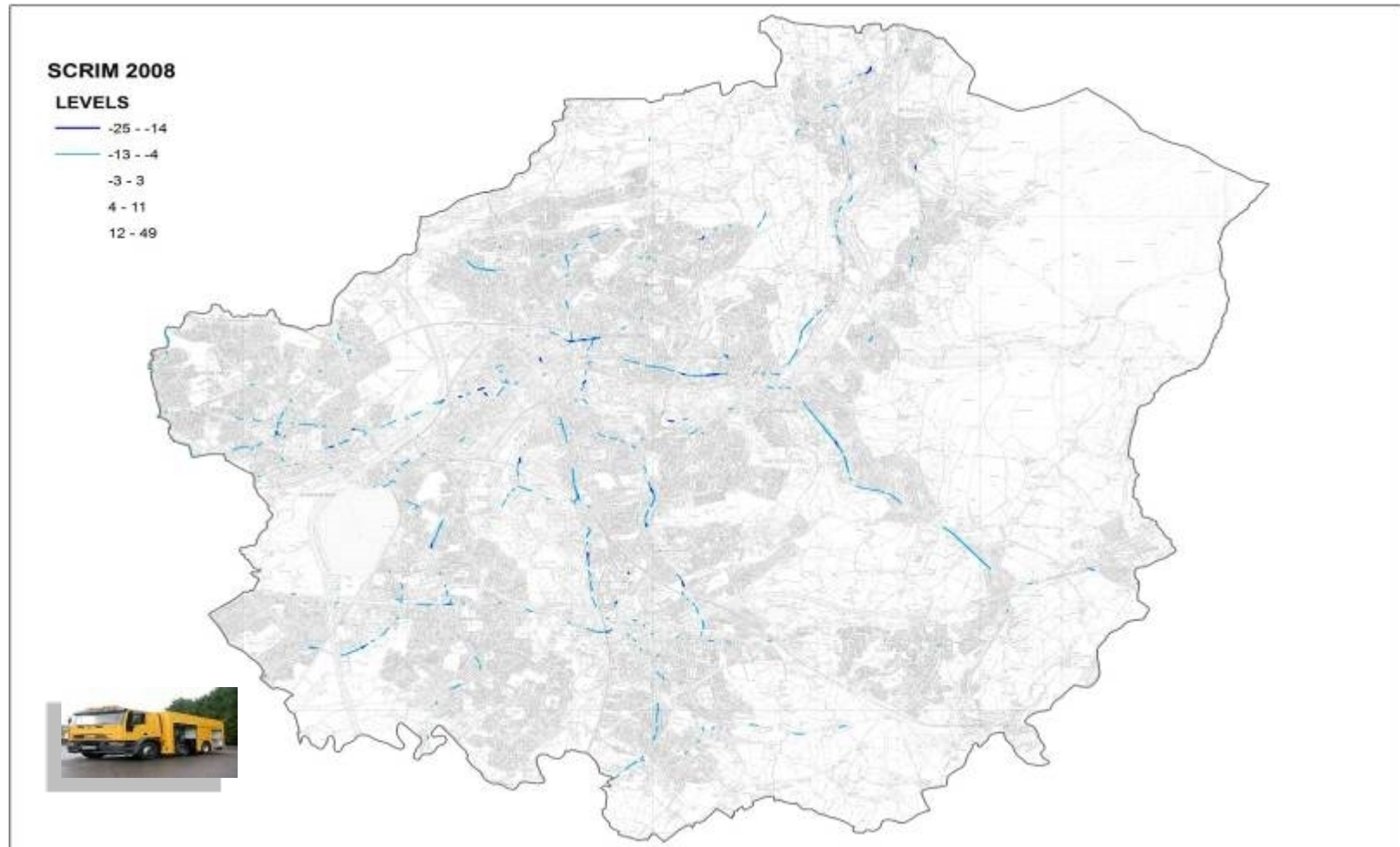
<b>Highway Annual Maintenance Investment</b>		
	DfT Toolkit for steady state (£m)	DfT & TMBC allocations (£m)
Highways	£6.18	£3.12
Structures	£2.26	£0.58
Street Lighting	£2.00	£0.61
<b>Total:</b>	<b>£10.44</b>	<b>£4.31</b>

## Programme Building Classified Roads – SCANNER

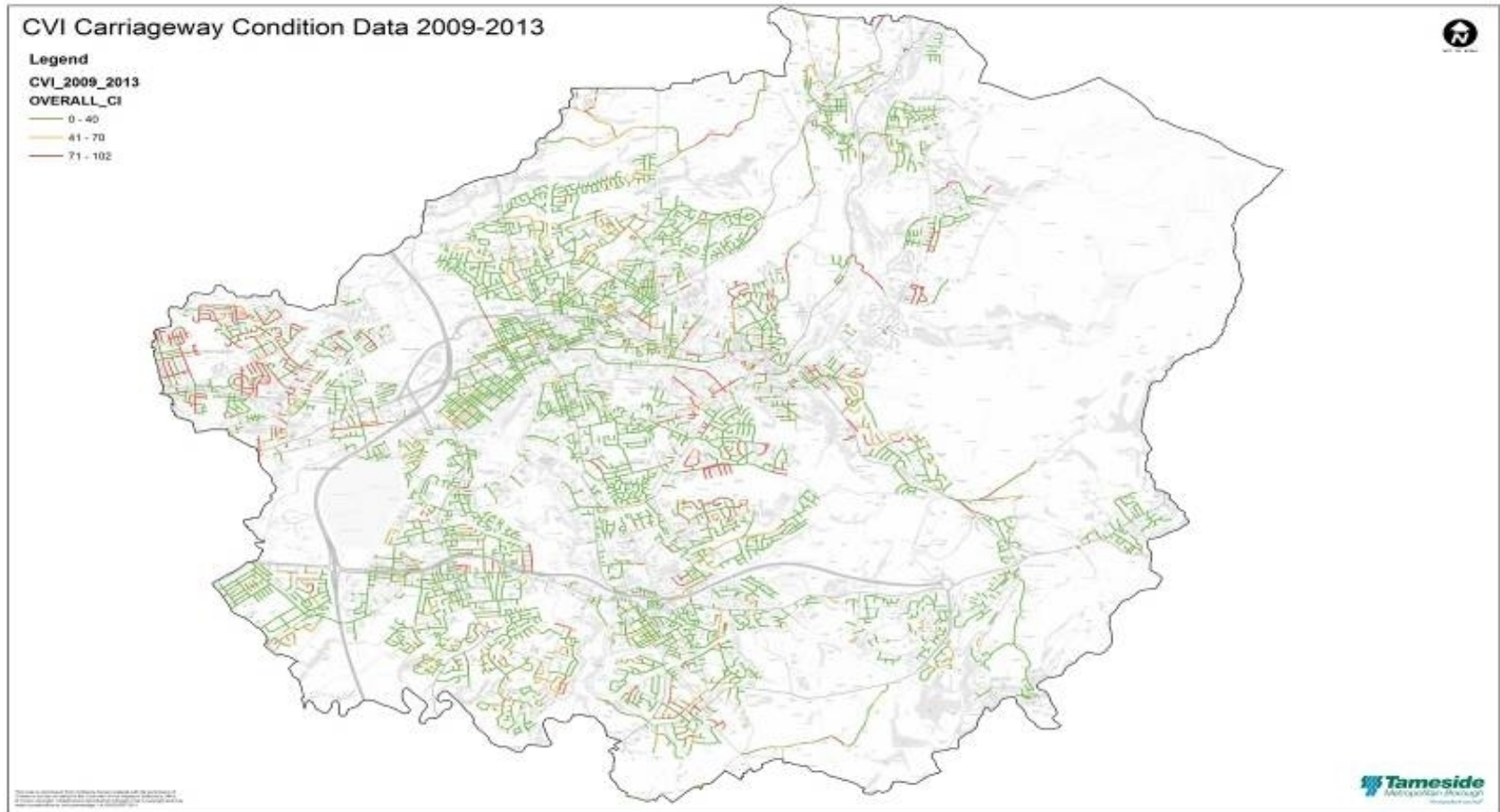




# Programme Building Classified Roads – SCRIM



# Programme Building Unclassified Roads - CVI



# Condition Rating – ‘Traffic Light’

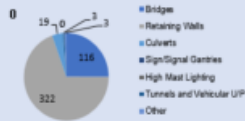
<u>Condition Rating</u>			<u>Description</u>
9	Very Poor	RED	Very poor condition, regular repairs needed, should be consider for major works as soon as possible
8	Poor	RED	Difficult to keep serviceable, major works may be the only way to achieve improvements
7	Deteriorating	RED	Repairs needing to be ordered more each inspection to maintain in reasonable condition, but not needing major works at this time
6	Below Average	AMBER	Deteriorating, numerous openings and requiring a small number repairs each inspection
5	Average	AMBER	Reasonable condition, what would be consider to be normal condition; neither good or bad
4	Fair	AMBER	Starting to exhibit a small amount of wear and tear but in reasonable condition
3	Good	GREEN	No work needed to be considered for some time, few repairs needed at each inspection
2	Very Good	GREEN	May be a few years old but no deterioration, very few repairs needed at each inspection
1	Excellent	GREEN	Looks recently renewed

# Highway Structures



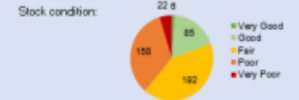
## Valuation Dashboard

Organisation: **Local Authority**  
 Date data input: **00/07/2000**  
 No. of Structures: **463**  
 No. of Elements: **2444**



Stock Gross Replacement Cost: **£ 269,253,006**  
 Stock Depreciated Replacement Cost: **£ 164,002,203**

Indexation used for valuation: **2020/21**  
 Valuation Date: **27/10/2021**  
 Annual Depreciation: **£ 2,264,106**



### Stock Summary

#### Average condition across the stock



Condition Band	No. of assets
Very Good	6
Good	85
Fair	192
Poor	158
Very Poor	22
<b>Total</b>	<b>463</b>

#### Average condition per structure type



#### Structure Stock Condition Indices (SSCI)

Asset Type	SSCI Average	SSCI Critical	SSS
Bridges	76.9	72.5	93.7%
Retaining Walls	62.0	51.6	51.4%
Culverts	70.8	58.3	83.4%
Sign/Signal Gantries	0.0	0.0	0.0%
High Mast Lighting	0.0	0.0	0.0%
Tunnels and Vehicular Underpasses	56.1	40.6	2.1%
Other	53.0	56.7	23.1%
<b>Stock</b>	<b>65.9</b>	<b>56.6</b>	<b>57.6%</b>

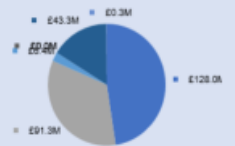
#### Valuation results per structure type

Structure Type	No. Structures	GRC	DFC	Depreciation	DFC as % of GRC
Bridges	116	£ 128,040,772	£ 94,881,896	£ 33,958,877	74.1%
Retaining Walls	322	£ 91,289,062	£ 30,271,517	£ 61,017,546	33.2%
Culverts	15	£ 6,363,320	£ 3,643,223	£ 2,740,096	57.1%
Sign/Signal Gantries	0	-	-	-	0.0%
High Mast Lighting	0	-	-	-	0.0%
Tunnels and Vehicular U/P	3	£ 43,269,391	£ 35,129,446	£ 8,139,945	81.2%
Other	3	£ 270,460	£ 76,121	£ 194,339	28.1%
<b>Full stock</b>	<b>463</b>	<b>£ 269,253,006</b>	<b>£ 164,002,203</b>	<b>£ 60,930,800</b>	<b>60.9%</b>

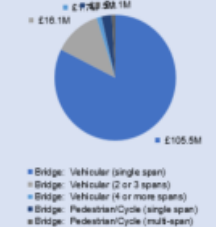
#### Valuation results per structure group

Asset Type	No. Structures	GRC	DFC	Depreciation	DFC as % of GRC
Bridge: Vehicular (single span)	52	£ 105,914,356	£ 82,481,128	£ 23,033,228	78.2%
Bridge: Vehicular (2 or 3 spans)	17	£ 16,146,296	£ 9,253,279	£ 6,893,016	57.3%
Bridge: Vehicular (4 or more spans)	2	£ 1,709,286	£ 1,031,633	£ 677,653	60.4%
Bridge: Pedestrian/Cycle (single span)	40	£ 3,521,179	£ 1,562,267	£ 1,958,912	44.4%
Bridge: Pedestrian/Cycle (multi-span)	5	£ 1,149,656	£ 553,588	£ 596,068	48.2%
Canilever Road Sign	0	-	-	-	-
Chamber/Cellar/Vault	0	-	-	-	-
Culvert (single cell)	16	£ 6,072,979	£ 3,425,972	£ 2,646,947	56.4%
Culvert (multi-cell)	3	£ 310,401	£ 217,252	£ 93,149	70.0%
High Mast Lighting	0	-	-	-	-
Retaining Wall (height > 3m)	42	£ 28,258,874	£ 11,091,963	£ 17,166,912	39.3%
Retaining Wall (height ≤ 3m)	280	£ 63,030,188	£ 19,179,554	£ 43,850,634	30.4%
Sign/Signal Gantry (canilever)	0	-	-	-	-
Sign/Signal Gantry (spanning)	0	-	-	-	-
Structural Earthworks (height > 3m)	0	-	-	-	-
Structural Earthworks (height ≤ 3m)	0	-	-	-	-
Underpass: Vehicular	0	-	-	-	-
Underpass (or Subway): Pedestrian	3	£ 270,460	£ 76,121	£ 194,339	28.1%
Subway: Pipe	0	-	-	-	-
Tunnel (bored)	0	-	-	-	-
Tunnel (cut and cover)	3	£ 43,269,391	£ 35,129,446	£ 8,139,945	81.2%
<b>Total</b>	<b>463</b>	<b>£ 269,253,006</b>	<b>£ 164,002,203</b>	<b>£ 60,930,800</b>	<b>60.9%</b>

#### Valuation by Structure Type



#### Valuation by Bridges Type



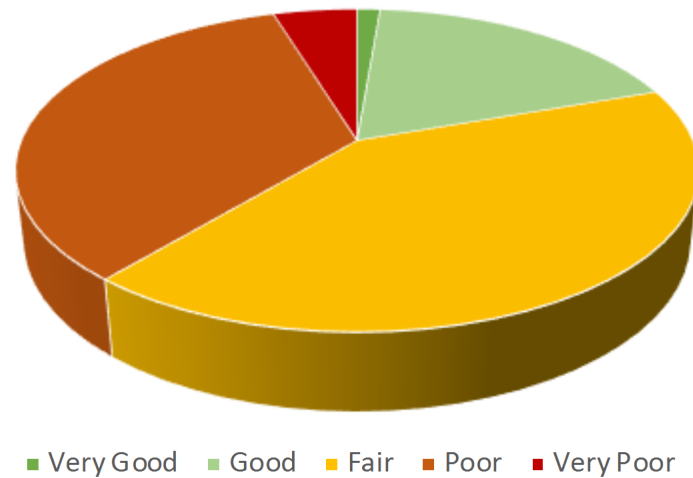
# Highway Structures

2021

## Highways Structures Condition

	No.	%ge
Very Good	6	1.30
Good	85	18.36
Fair	192	41.47
Poor	158	34.13
Very Poor	22	4.75
Total	463	

Highways Structures Condition





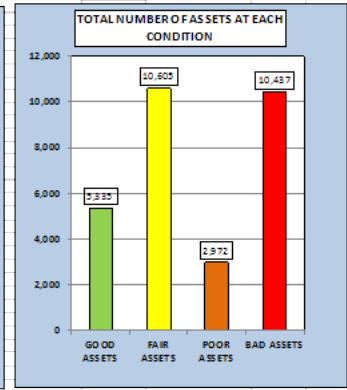
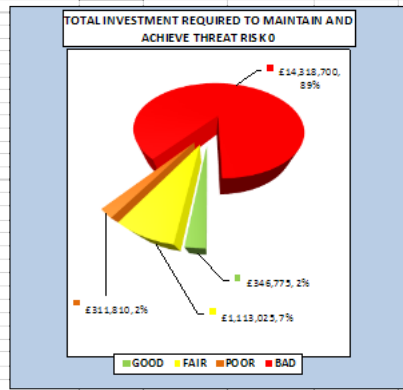
# Street Lighting

TAMESIDE MBC LIFE CYCLE INVESTMENT SUMMARY				
STREET LIGHTING				
2022	ACTION			
	TARGET	TESTING	TESTING	REPLACE
	CONDITION AND AGE PROFILE			
	GOOD THREAT RISK 0 0-15 years	FAIR THREAT RISK 1 16-25 years	POOR THREAT RISK 2 26-30 years	BAD THREAT RISK 3 31+ years
ASSETS				
5M COLUMN	E248,000	E931,260	E198,266	E4,287,900
8M COLUMN	E30,810	E45,096	E26,280	E3,483,900
10M COLUMN	E62,325	E95,260	E40,100	E3,102,900
12M COLUMN	0	E10,500	E26,096	E220,000
HERITAGE COLUMN	E6,195	E27,000	E19,260	E455,000
ILLUMINATED SIGNS	E4,180	E31,500	E42,000	E2,040,000
COLUMNS & SIGNS INVESTMENT	E341,770	E1,163,626	E304,816	E14,313,700
	ACTION			
	TARGET	REPLACE	REPLACE	
	CONDITION AND AGE PROFILE			
	0-5 YEARS	6-10 YEARS	11-16 YEARS	16+ YEARS
BOLLARDS	E5,005	E10,000	05,000	E40,000
BOLLARD INVESTMENT	E5,005	E10,000	05,000	E40,000
INVESTMENT VALUE ALL ASSETS	E346,775	E1,173,626	E311,816	E14,313,700
NOTES				
FAIR	The poles at which NOT (Kondor) include column lighting beams			
POOR	The poles at which the condenser is expected to degrade. Individual checks assume how we keep testing until they hit level risk 3. Additional funding required (looked in to be at level 1 and 2) will also apply to signs and bollards.			
	Other lighting such as lighting on wooden poles has been included within the appropriate asset class.			
	No allowance has been taken for underground assets (freezer pillars, etc) at this stage. Columns highlighted in blue have been added to the next higher column band.			
	No specific data has been gathered from site and limited age profiles exist within symbology.			
	Information has been taken from 2007 submission without site surveys being undertaken. Information cannot be verified and should be treated as such.			
	The price of the luminaires can be removed once the LED trial to save programme is complete.			
	It is assumed columns replaced are one for one.			
	All columns based on typical design life of 25 years.			
	Threat Risk	All assets at Risk Level	Treatment	
GOOD	0	6,336	These supports are considered to have the least risk.	
FAIR	1	10,806	These supports have manageable risk and should be considered for structural testing.	
POOR	2	2,972	These supports have manageable risk but should be programmed for replacement; they have exceeded their design life by the manufacturer.	
BAD	3	10,437	These supports potentially provides the greatest risk to the public and an operating authority. These assets should be targeted for replacement first.	

LIGHTING COLUMNS BASED ON TECHNICAL REPORT 22 (TR22)							
GOOD	→	Acceptable	→	Continue to monitor TR22	→	Continue to monitor TR22	→
FAIR	→	Medium to low priority	→	Continue to monitor TR22, structural testing	→	Continue to monitor TR22, structural testing	→
POOR	→	Medium to high priority	→	Continue to monitor TR22, structural testing	→	Continue to monitor TR22, structural testing	→
BAD	→	High priority	→	Continue to monitor TR22, structural testing	→	Continue to monitor TR22, structural testing	→
Total investment per column size	Total columns and signs	THREAT RISK 0-15 years	THREAT RISK 16-25 years	THREAT RISK 26-30 years	THREAT RISK 31+ years	Columns requiring action	Average investment needed per unit
E5,196,116	18,251	3,200	8,210	1,513	4,988	18,251	E286
E3,512,296	3,174	674	436	266	2,096	3,174	E1,107
E3,481,626	3,475	805	535	254	1,754	3,475	E1,001
E286,596	439	0	100	239	100	439	E652
E500,126	616	56	290	130	130	616	E816
E2,117,690	2,454	64	300	400	1,700	2,454	E869
TOTALS	28,422	6,388	16,696	2,922	9,797	28,422	84,706

BOLLARD CONDITION CATEGORY							
Total investment required on bollards	Total bollards	Good condition 0-5 YEARS	Fair condition 6-10 YEARS	Poor condition 11-16 YEARS	Bad condition 16+ YEARS	Bollards requiring action	Average investment needed per unit
E40,005	527	77	100	60	700	527	E75

GOOD	E346,775	GOOD ASSETS	6,336
FAIR	E1,163,626	FAIR ASSETS	10,806
POOR	E311,816	POOR ASSETS	2,972
BAD	E14,313,700	BAD ASSETS	10,437
E14,960,310			29,349



## Street Lighting

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- Age profile of our columns is dictating our strategy for maintenance
- We undertake structural testing on a percentage of our columns
- We undertake visual inspections
- We undertake electrical testing

# Winter Maintenance

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# Risk Management



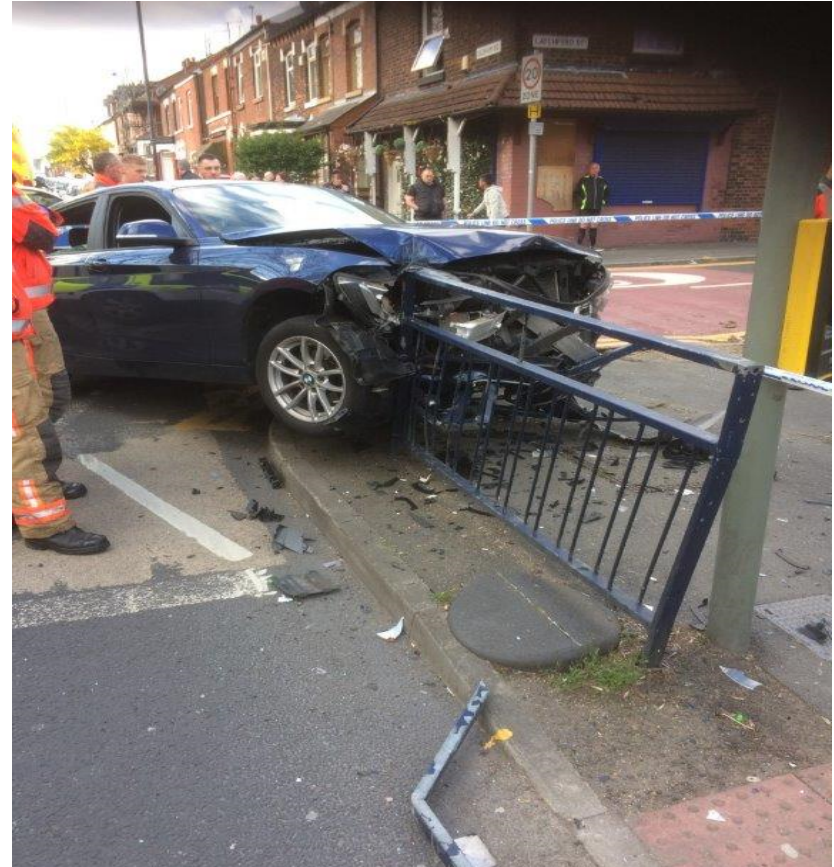
## Risk Management

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- We undertake regular inspections of the network based on our policy.
- The frequency is determined on a risk based approach.
- Interventions are based on our criteria
- Inspections undertaken last year
  - 7,516 footway
  - 7,118 carriageway



# On-Call Engineer



# Highways Maintenance

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020828745