Neighbourhood Forums
Highways Maintenance

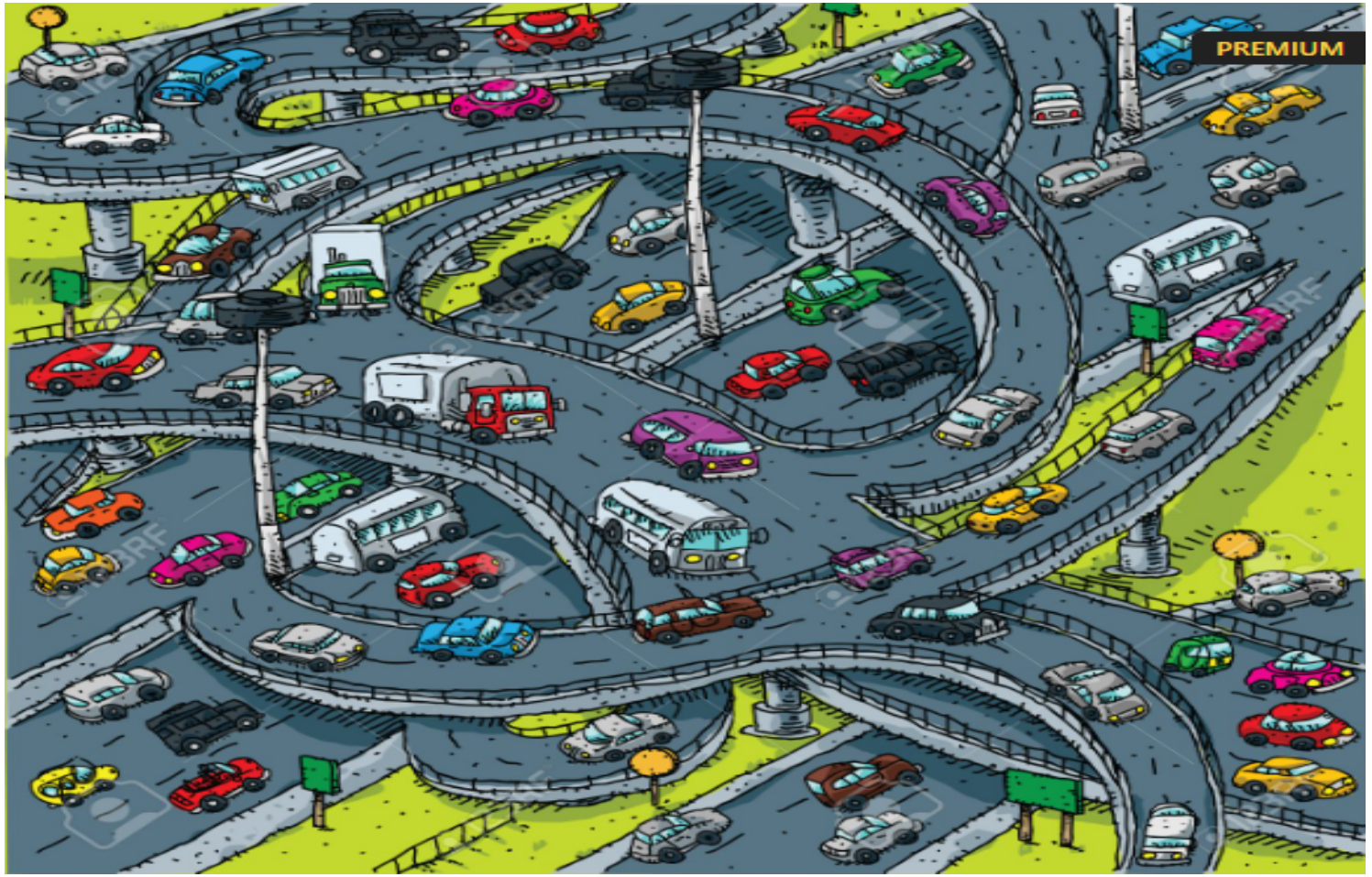
Lee Holland

Head of Engineering Services

October 2023

Tameside Metropolitan Borough

What do we mean by “Highways”



Tameside Metropolitan Borough

Tameside's Highway Network

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

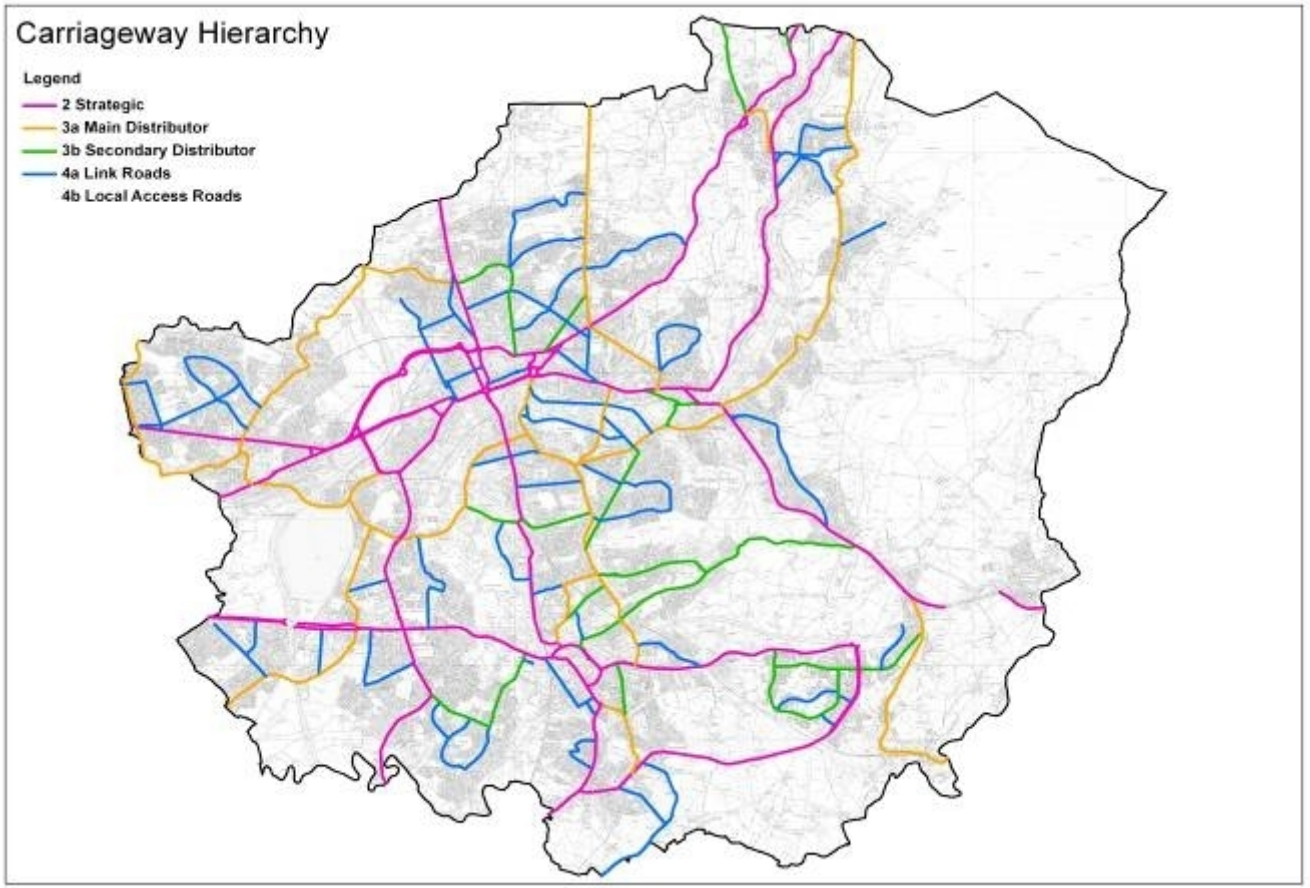
4,000 Signs (illuminated and non-illuminated)

159 Bridges

304 Retaining Walls / Structures

Tameside Metropolitan Borough

Tameside's Highway Hierarchy



Establish maintenance strategies relative to demand / risk

Tameside Metropolitan Borough

Asset Valuation for Whole of Government Accounts (WGA)

2022 Return Asset Type	Gross Replacement Cost (£m)	Depreciation (£-m)	Depreciated Replacement 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
TOTAL	**1,726.2**	**304.2**	**1,422.0**

Tameside Metropolitan Borough

Highway Asset Groups

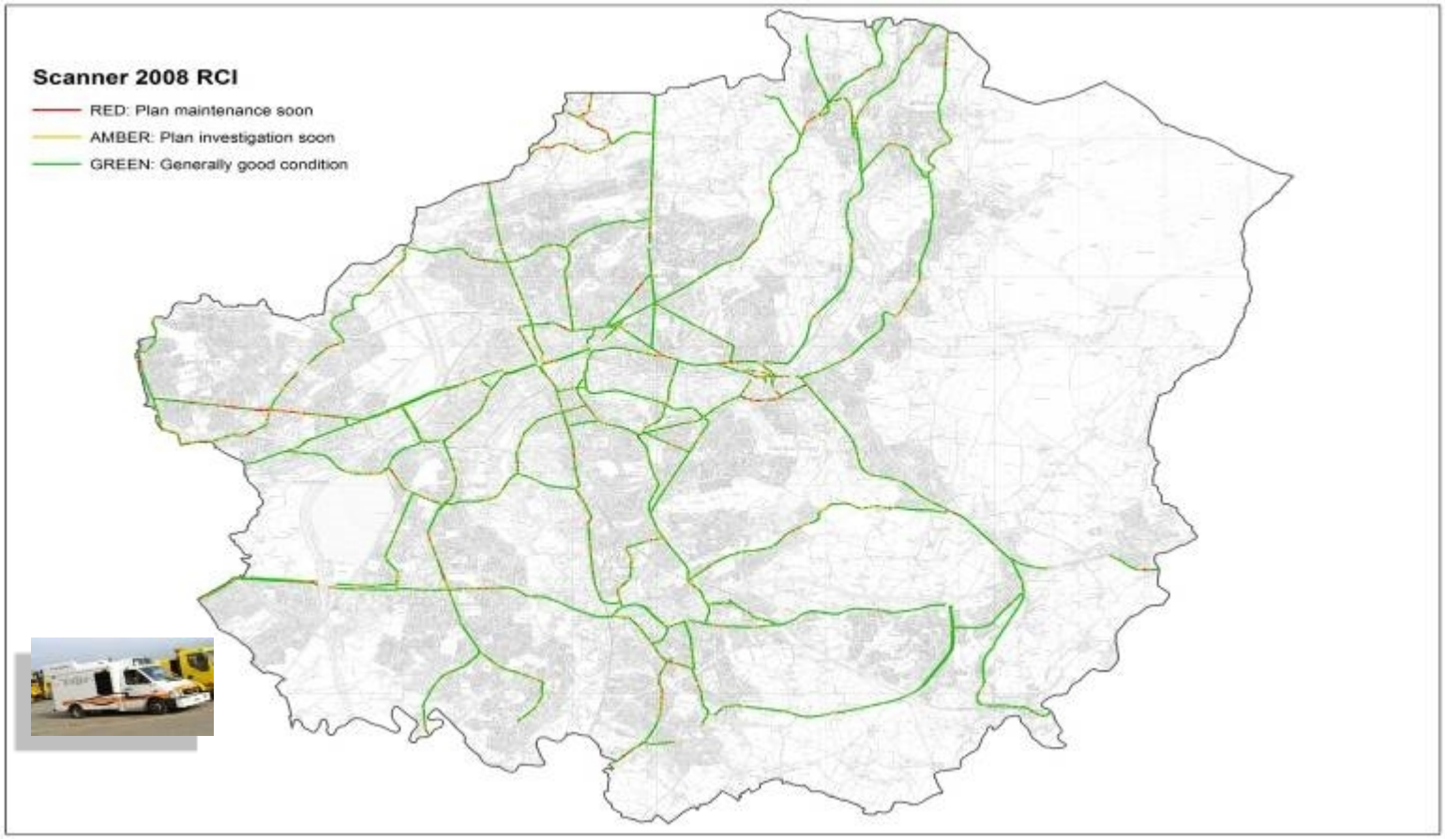
- Highways (footways, roads and drainage)
- Structures (bridges and retaining walls)
- Street lighting (lighting columns or illuminated signs)
- Winter maintenance (gritting)

Highway Assets Annual Maintenance Investment

Highway Annual Maintenance Investment		
	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
Total:	**£10.44**	**£4.31**

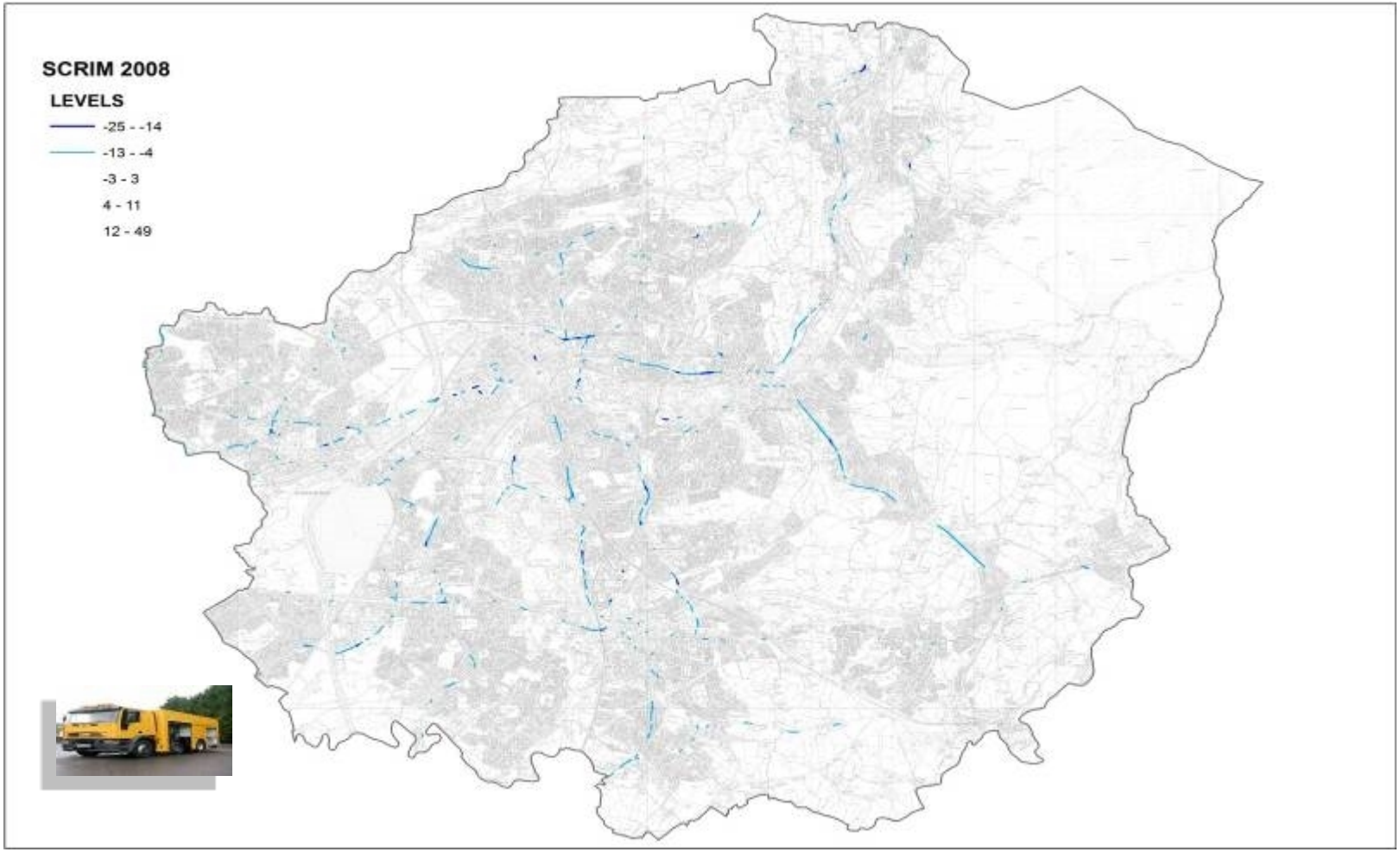
Tameside Metropolitan Borough

Programme Building Classified Roads – SCANNER



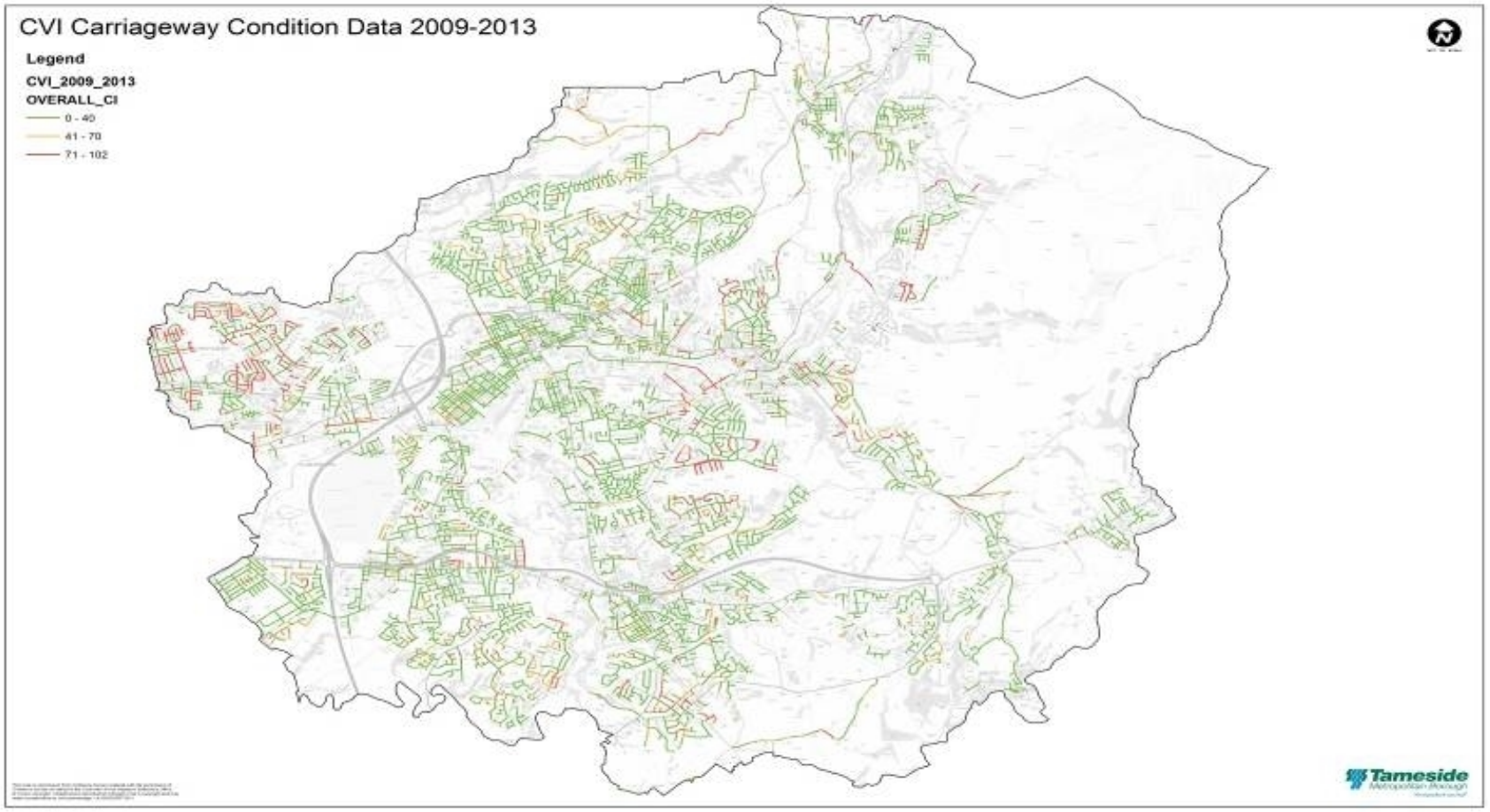
Tameside Metropolitan Borough

Programme Building Classified Roads – SCRIM



Tameside Metropolitan Borough

Programme Building Unclassified Roads - CVI



Tameside Metropolitan Borough

Condition Rating – 'Traffic Light'

Condition Rating			Description
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

Tameside Metropolitan Borough

Highway Structures

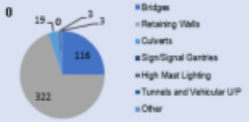
SAVI

Valuation Dashboard

Organisation:
Authority type: **Local Authority**

Date data input: **00/01/1900**

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**

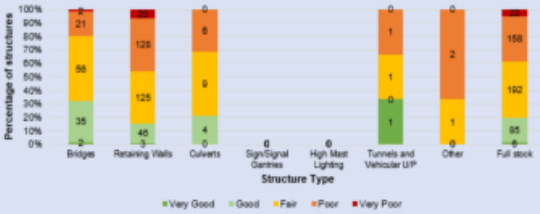
Stock condition:

Stock Summary

Average condition across the stock

Condition Band	No. of assets
Very Good	6
Good	85
Fair	192
Poor	158
Very Poor	22
Total	**463**

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%
Stock	**65.9**	**56.6**	**57.6%**

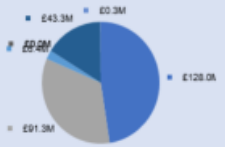
Valuation results per structure type

Structure Type	No. Structures		GRC		DRC		Depreciation	DRC as % of GRC
Bridges	116	£	128,040,772	£	94,881,895	£	33,158,877	74.1%
Retaining Walls	322	£	91,289,062	£	30,271,517	£	61,017,546	33.2%
Culverts	19	£	6,383,320	£	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%
Full stock	**463**	**£**	**269,253,006**	**£**	**164,002,203**		##########	**60.9%**

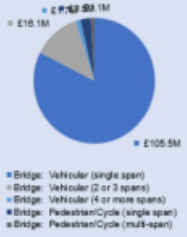
Valuation results per structure group

Asset Type	No. Structures		GRC		DRC		Depreciation	DRC as % of GRC
Bridge: Vehicular (single span)	52	£	105,514,356	£	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%
Cantilever Road Sign	0	£	-	£	-	£	-	
Chamber/Cellar/Vault	0	£	-	£	-	£	-	
Culvert (single cell)	16	£	6,072,919	£	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 (cantilever)	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%
Total	**463**	**£**	**269,253,006**	**£**	**164,002,203**		##########	**60.9%**

Valuation by Structure Type



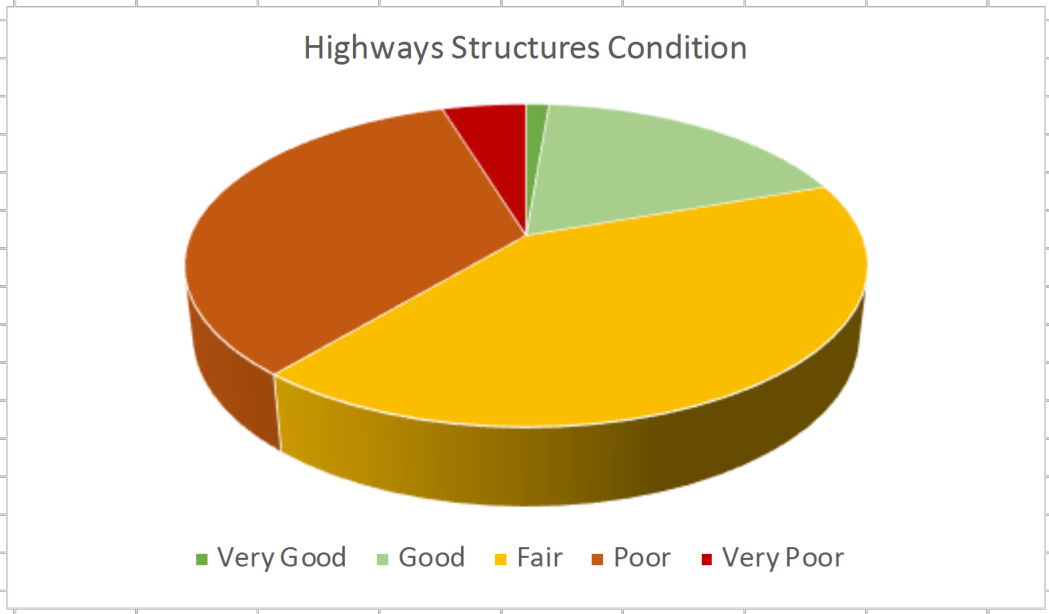
Valuation by Bridges Type



Tameside Metropolitan Borough

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	



Tameside Metropolitan Borough

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				
≤ 8M COLUMNS	£248,300	£631,250	£158,895	£4,857,600
8M COLUMNS	£30,210	£45,056	£26,880	£3,403,500
10M COLUMNS	£52,325	£95,250	£40,320	£3,332,400
12M COLUMN	£0	£10,500	£25,095	£220,000
HERITAGE COLUMNS	£5,175	£27,300	£13,650	£499,800
ILLUMINATED SIGNS	£4,160	£31,500	£42,000	£2,040,000
COLUMNS & SIGNS INVESTMENT	£341,770	£1,103,025	£306,810	£14,313,700

	ACTION: TARGET	REPLACE	REPLACE
	CONDITION AND AGE PROFILE: 0 - 5 YEARS	6 - 10 YEARS	11 - 15 YEARS	16 + YEARS
BOLLARDS	£5,005	£10,010	£5,000	£420,000
BOLLARD INVESTMENT	£5,005	£10,000	£5,000	£420,000
INVESTMENT VALUE ALL ASSETS	£346,775	£1,113,025	£311,810	£14,313,700

NOTES

FAIR — is the point at which NOT (Wonders Intuitive column testing begins)
POOR — is the point at which the column has exceeded its design life. Individual sheets assume that we keep testing until they hit threat risk 3. Additional funding required if columns in threat band 1 and 2 fail. Also applies 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/Feeder pillars etc at this stage.
Columns heights in between have been added to the next highest column band
No specific data has been gathered from site and limited age profiles exist within synology.
Information has been taken from 2007 submission without site surveys being undertaken the information cannot be verified and should be treated as such

The price of the luminaire can be removed once the LED Invest 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	5,335	These supports are considered to have the least risk
FAIR	1	10,605	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 as 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 targetted for replacement first

LIGHTING COLUMNS BASED ON TECHNICAL REPORT 22 (TR22)

GOOD	→	Acceptable	→	Continue to monitor TR22
FAIR	→	Medium to low priority	→	Continue to monitor TR22 and start structurally testing
POOR	→	Medium to high priority	→	Continue to monitor TR22, Struturally test and replace if sufficient funds allow
BAD	→	High priority	→	These assets should be targetted for replacement first

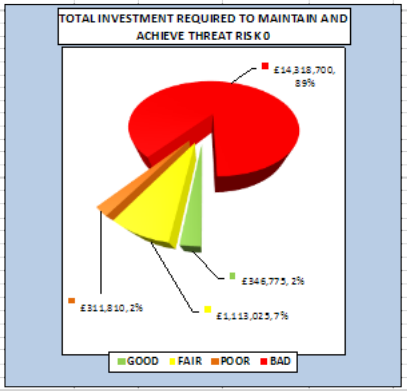
	Total investment per column size	Total columns and signs	THREAT RISK 0 0-15 years	THREAT RISK 1 16 -25 years	THREAT RISK 2 26-30 years	THREAT RISK 3 31 + years	Columns requiring action	Average investment needed per unit
ASSETS								
≤ 8M COLUMNS	£6,196,115	18,251	3,820	8,870	1,513	4,048	18,251	£339
8M COLUMNS	£3,512,255	3,174	474	439	266	2,035	3,174	£1,107
10M COLUMNS	£3,481,625	3,475	805	595	324	1,754	3,475	£1,001
12M COLUMN	£266,555	439	0	100	239	100	439	£592
HERITAGE COLUMNS	£542,125	615	55	260	130	130	615	£816
ILLUMINATED SIGNS	£2,117,950	2,454	64	300	400	1,700	2,454	£859
TOTALS		28,422	5,258	10,606	2,922	9,757	28,422	£4,704

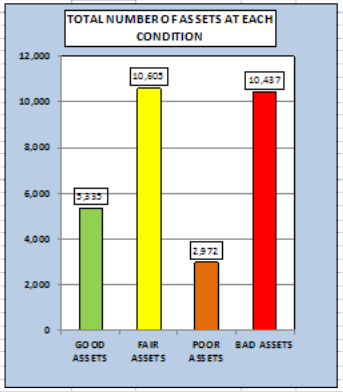
BOLLARD CONDITION CATEGORY

	Total investment required on bollards	Total bollards	Good condition 0 - 5 YEARS	Fair condition 6 - 10 YEARS	Poor condition 11 - 15 YEARS	Bad condition 16 + YEARS	Bollards requiring action	Average investment needed per unit
BOLLARDS	£440,005	527	77	100	50	700	527	£475

GOOD	£346,775
FAIR	£1,113,025
POOR	£311,810
BAD	£14,313,700
	£16,050,310

GOOD ASSETS	5,335
FAIR ASSETS	10,605
POOR ASSETS	2,972
BAD ASSETS	10,437
	29,349





Tameside Metropolitan Borough

Street Lighting

- 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

Tameside Metropolitan Borough

Risk Management

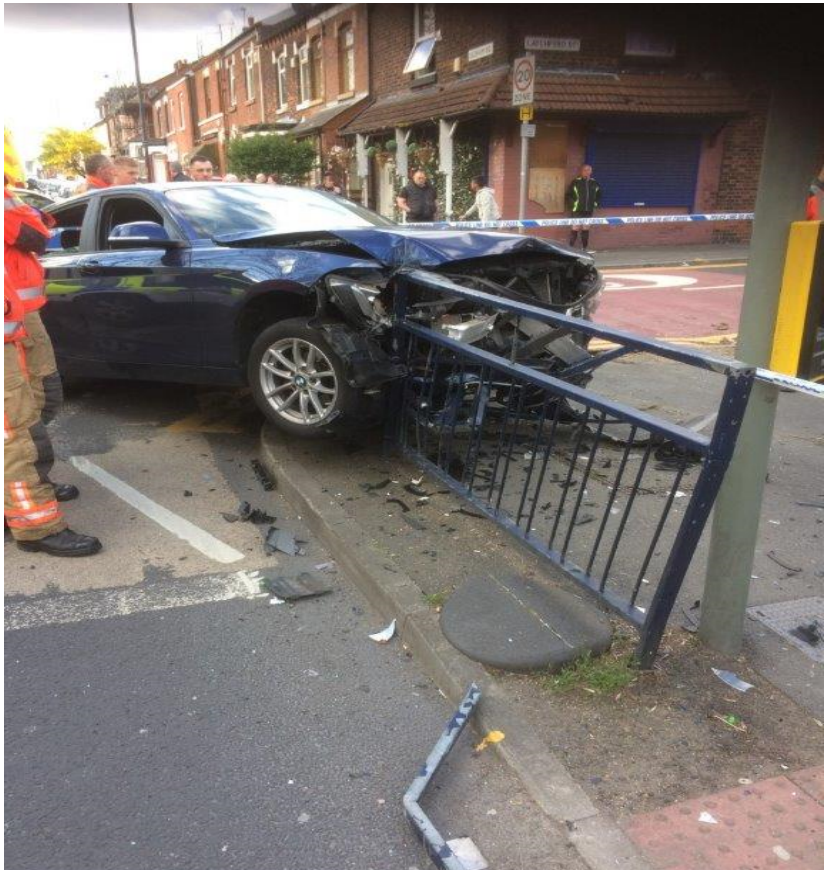
Tameside Metropolitan Borough

Risk Management

- 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

Tameside Metropolitan Borough

On-Call Engineer



Highways Maintenance