

# PLACE SELECT COMMITTEE

Review of Highway Infrastructure  
Asset Management

21<sup>st</sup> June 2021

# Key Lines of Enquiry

- What are the most common problems reported to Community Services and Transport? How have these problems changed over time?
- What is SBC's Highway Infrastructure Routine Safety Inspection regime?
- Could advances in technology, or new materials, be utilised to improve the quality of highways in the long term?

# Statutory Duty

- Highways Act 1980, Section 41 – Places a statutory duty on local authorities to maintain the highway at public expense.
- Highways Act 1980, Section 58 – Provides the Authority with a defence against claims for failure to maintain the highway.
- Traffic Management Act 2004 – Places a duty on local authorities to ensure 'the expeditious movement of traffic' along the highway network.

# Defect Reporting

- Elected Members – via ‘Report It’ or direct contact with officers.
- Public – via ‘Report It’ function on website.
- Members of Parliament – via Information Governance.

The screenshot shows the 'Report It' page on the Stockton-on-Tees Borough Council website. At the top, there is a navigation bar with links for 'OUR COUNCIL', 'OUR PEOPLE', 'OUR PLACES', and 'OUR ECONOMY'. A red warning banner is present, stating: 'For Coronavirus information including the current restrictions, any disruptions to Council services, how to book a COVID-19 test and the support available for residents and businesses visit [www.stockton.gov.uk/coronavirus](http://www.stockton.gov.uk/coronavirus)'. Below the banner, the breadcrumb 'Home / Report It' is followed by the 'Report It' title. A search bar with the placeholder 'I'm looking for...' and a 'Search' button is visible. A list of categories is shown on the left, including 'Change of address', 'Crime and anti-social behaviour', 'Waste and recycling', 'Roads, Pavements and Street Lights', and 'Council Tax'. The 'Roads, Pavements and Street Lights' category is expanded, showing sub-items: 'Broken street light', 'Damaged road, path, pothole or road sign', 'Dog fouling', and 'Damaged alley gate'. On the right, there is a 'Browse this section' menu with options 'Apply for it', 'Report It', and 'Pay for it'. Below this is a 'My Stockton' section with 'Login or Register' links. At the bottom right, a 'Can't find it?' section provides a 'Let us know' link and a message: 'Can't find what you're looking for? Let us know and we'll do our best to point you in the right direction'.

# Website – ‘Report It’

[About](#) [Store](#)

[Gmail](#) [Images](#)  



[Google Search](#) [I'm Feeling Lucky](#)

Google Workspace is now available to everyone

United Kingdom

[Advertising](#) [Business](#) [How Search works](#)

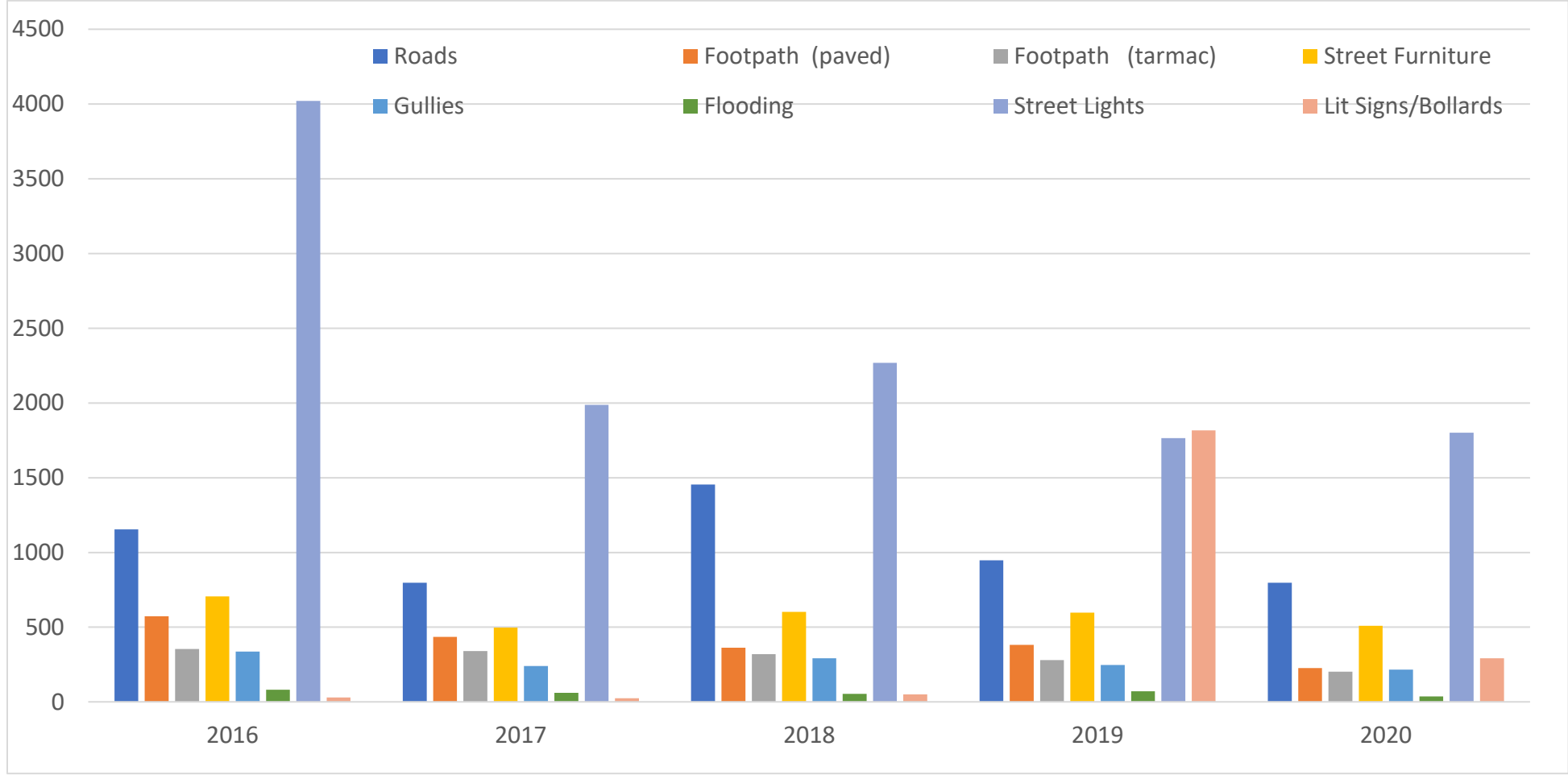
 Carbon neutral since 2007

[Privacy](#) [Terms](#) [Settings](#)

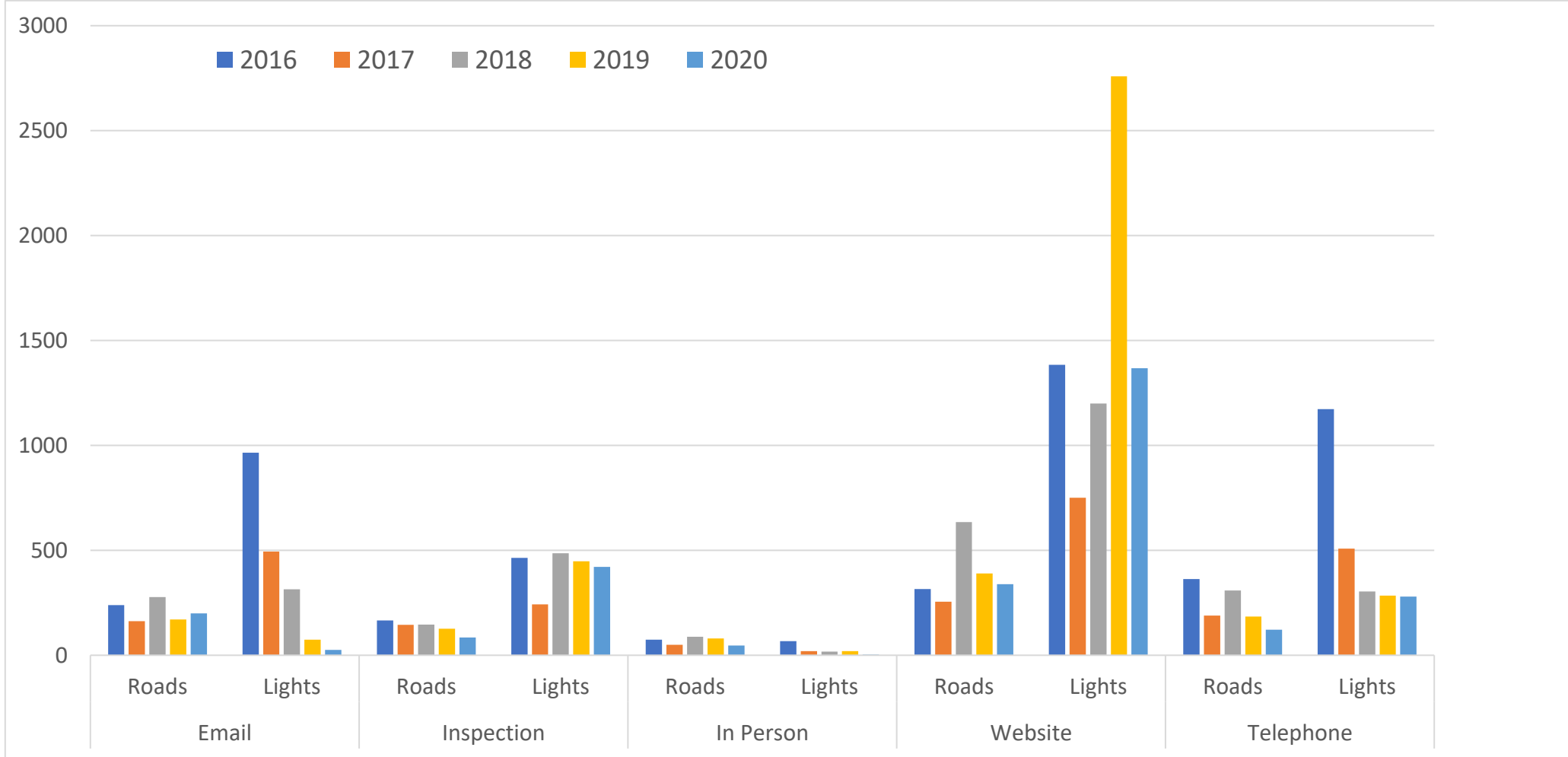
# Common Defect Reports (1)

	2016	2017	2018	2019	2020
Road	1155	798	1454	948	798
Footpath (Paved)	574	436	363	382	227
Footpath (Tarmac)	355	340	320	280	202
Street Furniture	709	497	602	598	510
Gullies (Cleansing)	437	312	374	306	248
Flooding	82	61	55	72	37
Street Lights	4020	1987	2268	1764	1801
Lit Signs/ Bollards	30	25	50	1816	293
<b>Total</b>	<b>7262</b>	<b>4385</b>	<b>5405</b>	<b>6321</b>	<b>4396</b>

# Common Defect Reports (2)



# Roads and Lights by Reporting Medium (1)





# Roads and Lights by Reporting Medium (2)

	2016		2017		2018		2019		2020	
	Roads	Lights	Roads	Lights	Roads	Lights	Roads	Lights	Roads	Lights
Email	239	965	162	494	277	317	170	70	199	25
Inspection	165	463	144	242	146	485	126	447	84	420
In Person	74	67	49	19	88	17	79	17	46	3
Website	315	1383	255	750	634	1199	389	2758	338	1367
Telephone	362	1172	188	507	309	303	184	284	131	279
<b>Total</b>	<b>1155</b>	<b>4050</b>	<b>798</b>	<b>2012</b>	<b>1454</b>	<b>2318</b>	<b>948</b>	<b>3580</b>	<b>798</b>	<b>2094</b>

# Highway Safety Inspection Regime

- Sets out the procedures, processes and schedules for inspecting highway infrastructure assets on both a regular and reactive basis.
- Starting point for how we define what is an 'actionable defect' (pothole, trip hazard).
- One step in allowing us to form our Section 58 defence.
- Court judgement that we cannot be reasonably expected to maintain a road to the standard of a bowling green, it is expected that there will always be some imperfections.

# Highway Safety Inspections

This document was classified as: OFFICIAL

- Routine – Scheduled throughout the year, based on hierarchy
- Reactive – Based on reports
- Both have the same purpose

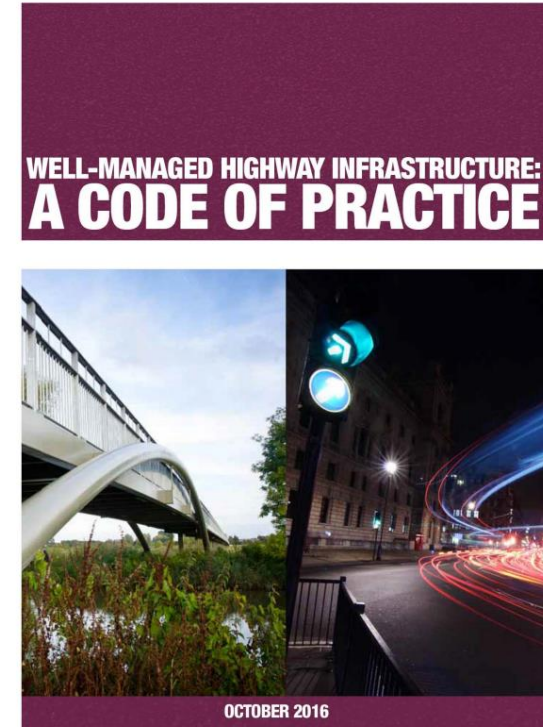
**Road Hierarchy**

Hierarchy	Category	Typical Description
1	Motorway	Limited Access – Motorway Regulations Apply.
2	Strategic Route	Trunk and some Principal A class roads between primary destinations including the TVCA Key Route Network.
3a	Main Distributor	Major Urban Network and Inter-Primary Links. Short – medium distance traffic.
3a	Secondary Distributor	B and C class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions.
4a	Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions.
4b	Local Access Road	Roads serving limited numbers of properties carrying only access traffic.
5	Minor Road	Little used roads serving very limited number of properties.

# What is a Pothole or Trip Hazard?

- No national standard definition of what constitutes a pothole or trip hazard.
- 2016 UK Road Liaison Group Code of Practice – ‘Well Managed Highway Infrastructure’
- SBC investigatory levels - 40mm for roads and 20mm for footpaths
- Risk Matrix to determine timescale for repair

UK ROADS LIAISON GROUP



# Risk Matrix

- Assesses likelihood and consequence of a risk occurring.
- Gives priority for repair
  - Cat 1 = 24 hours (some at 2 hours)
  - Cat 2H = 10 working days
  - Cat 2M = 28 days
  - Cat 2L = review/monitor at next inspection or add to next maintenance programme

# Traditional Processes

- Patching - cut out defect, remove waste, hand lay new material, level off.
  - Typical cost £50 - £80 per square metre
- Resurface – machine based process to remove old material and relay new.
  - Typical cost £15 - £20 per square metre



# Alternative Processes (1)

- Micro Asphalt
- Low traffic areas, shallow surface deterioration.
- Cold applied



# Alternative Processes (2)

- Surface Dressing
- Any Traffic Levels
- Pre patching required





# Alternative Processes (3)

- Retexturing



- Geotextile Reinforcement



# Alternative Processes (4)

- Grouted Macadam



# Alternative Processes (5)

- Spray Injection Patching



- Crack / Pothole Sealing



# New Materials (1)

- Recycled Rubber

- Recycled Plastic

**Turning old tyres into new roads**  
Tarmac's rubber modified asphalts enable old tyres to be converted into new roads and footpaths. As a result, they help to offset the environmental impact of highway maintenance activities and send out a strong local sustainability message.

**500 waste tyres = 1km of highway**

**8% reduction in CO<sub>2</sub>**

**Fully recycled in the UK**

**ULTILOW warm mix technology**

Tarmac rubber modified asphalts incorporate proven ULTILOW warm mix asphalt technology as standard. Warm mix asphalts are manufactured and laid at lower temperatures than conventional hot mix, resulting in lower CO<sub>2</sub> emissions during production. Site safety is also improved from reduced fumes and steam on site and a reduced risk of burns.

**Reduced carbon footprint**

The typical carbon footprint of Tarmac's rubber modified SMA solution will be around 8% lower than the equivalent conventional SMA.

**CO<sub>2</sub>**

**THE NEED**  
As part of a campaign by the client to find new and innovative uses for waste plastics Durham County were introduced to MacRebur's products by their asphalt supplier, Tynedale Roadstone.

**THE CHALLENGE**  
To replace existing Asphalt which had reached the end of its life with a new innovative sustainable product to further develop the local authorities understanding of the performance of these, MR8 was chosen as one of the products to use on site.

**THE MACREBUR SOLUTION**  
MR8, which is manufactured from plastics destined for disposal, is added to the Asphalt mix and allows for the fossil fuel proportion of the mix to be reduced, in this case 6%, of the bitumen in the mix, this gives clients the option to explore new methods to use waste plastics within the construction of asphalt which contribute to the environment with CO<sub>2</sub> reductions and controlling the disposal of waste plastics.

**THE RESULTS & BENEFITS**  
The existing asphalt was removed and then replaced with an AC 10 Asphalt Concrete. This allowed for a reduction in bitumen used in the mix which was replaced by a tonne of MacRebur's MR8. - This plastic would otherwise have gone to disposal.

For more information about our MR products please visit: [www.macrebur.com](http://www.macrebur.com)

This project recycled 1 tonne of plastic

That's equivalent to 80,000 500ml plastic bottles

Did you know...

# New Processes



# To Conclude

- What are the most common problems reported to Community Services and Transport? How have these problems changed over time?
- What is SBC's Highway Infrastructure Routine Safety Inspection regime?
- Could advances in technology, or new materials, be utilised to improve the quality of highways in the long term?