Gully Maintenance Revisited

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Introduction

- Lancashire highways service – overview
- Lancashire's current approach to gully maintenance
- The increasing stresses on the infrastructure
- Lancashire's new data led approach to gully maintenance

Lancashire Highways Service

Lancashire highways are responsible for maintaining 4,600 miles of road and 5,300 miles of footway

The authority is responsible for 12 of Lancashire's 14 districts, spanning an area of over 1,900 sq. miles

Lancashire is made up of a mixture of urban, rural, and coastal communities; with the Pennines in the East of county and the Fylde coast in West

There are almost 300,000 gullies within Lancashire's highway network

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Lancashire's approach to gully maintenance

Around 7 years ago as part of service level cost saving measures, Lancashire reduced its routine gully cleansing programme.

Since then, the service has been working to the following parameters:

- A reduced routine maintenance programme servicing gullies predominantly on the primary gritting network
- A reactive only approach to the remaining gullies

Outcomes following the change in approach

Cost savings achieved in the initial years following the change in approach

Increased demand for reactive cleansing year on year

Progressive decline in the condition of the reactive network

Limited collection of data in relation to the reactive network

Unsustainable demand on reactive cleansing service in recent years

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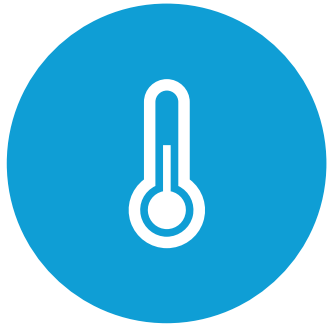
The increasing stresses on the infrastructure

The Met Office projects that UK winters will become warmer and wetter on average, with some winters potentially being up to 30% wetter than in the past.

Climate change is also expected to lead to an increase in the intensity of rainfall, meaning that when it rains, it will likely rain harder and for longer periods.



The UK has seen six of the ten wettest years on record since 1998, and the average UK winter has become around 15% wetter over the past century.

By 2070, the Met Office predicts that winters in the UK could be up to 30% wetter than they were in 1990, and rainfall will be up to 25% more intense.

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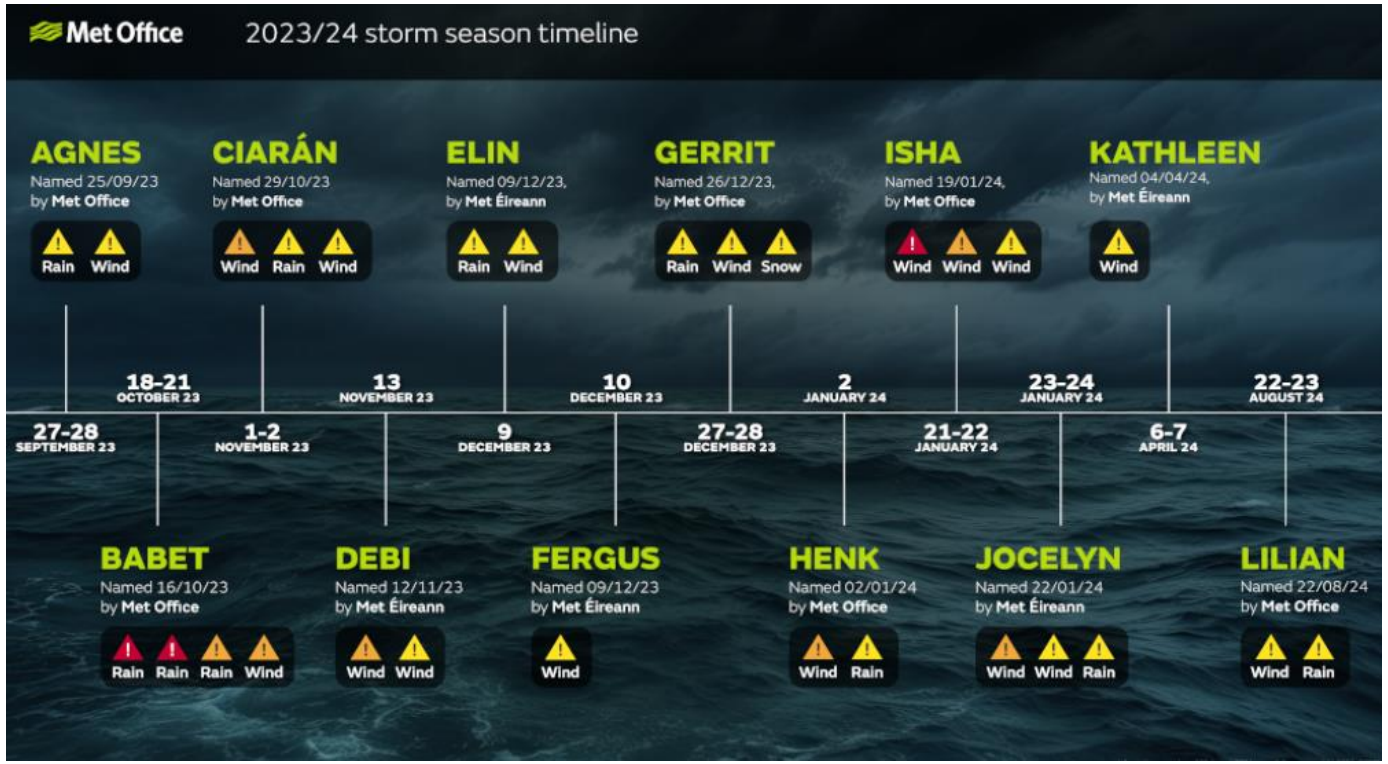
The increasing stresses on the infrastructure

The new National Flood Risk Assessment (NaFRA) recently released by the Environment Agency (EA) shows as many as 6.3 million properties in England are in areas at risk of flooding from one or a combination of sources: rivers, the sea and surface water. With climate change this could increase to around 8 million (or one in four) properties by the middle of the century.

The frequency and severity of flooding and storm surges will get worse with climate change. To keep pace with a changing climate, we need to both cut emissions and adapt to climate risks.

The 2023/24 storm season saw 12 named storms, the greatest number of named storms since the first season in 2015. In just 4 months between October 2024 and January 2025 there have been 5.



Storms Babet, Ciarán and Henk had particularly high impact in terms of flooding.

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Environment Agency

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The increasing stresses on the infrastructure

Flooding can lead to the deterioration of asphalt road surfaces, causing potholes, cracks, and other deformations, especially when water saturates the road for extended periods.

Floodwaters can damage bridges, culverts, and other highway infrastructure, requiring extensive repairs or replacement.

Flooding events necessitate increased maintenance efforts, including emergency repairs, debris removal, and long-term rehabilitation of damaged infrastructure, leading to higher costs.

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The increasing stresses on the infrastructure

“Changing weather events are having a major impact on the effectiveness of transport networks. We must develop a more resilient network through future proofing projects and maintenance activities. This will increase reliability for people’s travel and goods deliveries particularly as we face more extreme and varying climate events including flooding, high temperatures, severe weather and storms.”

“Maintenance of our existing highways and infrastructure assets is a key priority to ensure the efficient use of our transport network.”

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Lancashire's approach to gully maintenance

In 2022 Lancashire highways formed a new team with sole aim of focussing on the delivery of the routine maintenance programme

The team was tasked with overhauling processes in relation to the programme and procuring a new performance-based gully cleansing contract

The new contract was launched in early 2024

The result of this work was an operation that exceeded expectations in terms of performance

Lancashire's approach to gully maintenance

The success of the new contract coupled with increasing demand on reactive services led the highways team to review its approach gully cleansing in Autumn 2024

This analysis revealed that reactive visits were costing the service around 14 times more than routine visits under the new contract

The service concluded that it should move to routine cleansing for all gullies and offset the cost by changing the criteria for reactive cleansing

Cabinet approved the change of approach in January 2025

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The move back to 100% routine cleansing

Following cabinet approval in January 2025, the service launched a project to deliver on its commitment to 100% routine cleansing.

The project is ongoing and is focussed on the following 4 key deliverables:

- Policy Change
- Operational Resources
- Programme Development
- Digital Build

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Lancashire’s move towards a data led approach

Lancashire highways made 2 key commitments to Cabinet in January:

- The move back to routine maintenance for all gullies in Lancashire
- The future development of a 5-year data led gully cleansing programme

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Lancashire's move towards a data led approach

Lancashire's gully cleansing contract requires crews to collate various data sets as they work through the programme, including:

- Silt levels
- Asset data anomalies
- Defective frames/covers
- Blocked connections

Lancashire's move towards a data led approach

Robust follow up actions are coordinated by the gully management team, including:

- Correction of asset data anomalies
- Repairs to defective drainage infrastructure
- Investigations into blockages

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Lancashire’s move towards a data led approach

Lancashire highway’s plan to launch a new project in Autumn 2026 to develop the new 5-year programme

The new programme will be developed using the asset data collated during delivery of the current programme

It is envisaged that the asset data will be modelled in conjunction with topographical and flood risk data to create a smarter data led programme

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Thank You