

case study - drainage maintenance Essex Highways

How it started

Essex has 8,000km of highway with around 310,000 drainage assets that need to be maintained regularly and at different frequencies throughout the year, including 83,000 priority network gullies. Essex Highways needed a way to optimise the cleansing and jetting of their gully assets. Initially, gullies were being cleansed on a district by district basis with a priority network completed once per annum.

The solution

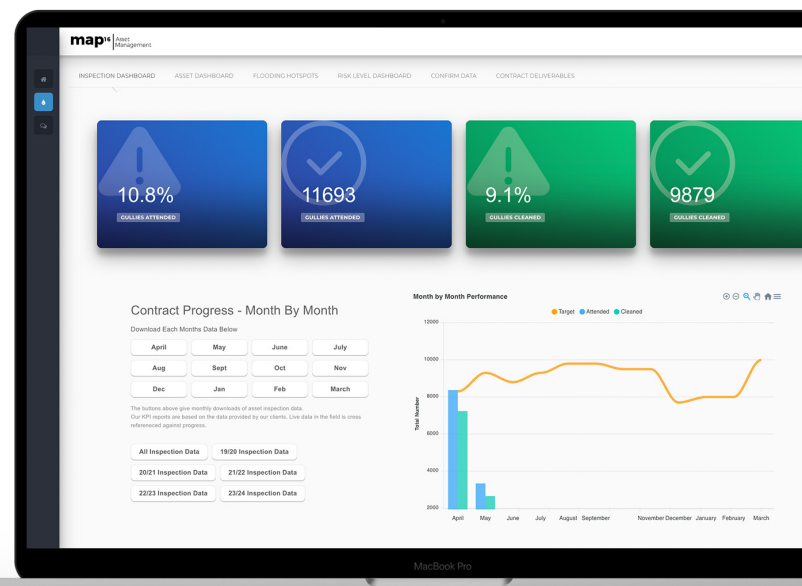
map16 processed and meticulously analysed 4 years worth of historical drainage data from Essex Highways' previous maintenance system, including flow rates, sediment build up, structural integrity, and maintenance history. Leveraging this data, map16 crafted a bespoke risk-centric asset management system tailored to the specific needs and challenges of Essex Highways. This system facilitated real-time monitoring of cleansing schedules across the expansive PR1 and PR2 networks, and enabled predictive maintenance strategies, pre-emptively addressing potential issues before they escalated. This streamlined process eliminated the necessity of waiting for a priority model that considered historic silt levels to be introduced, ensuring more proactive and efficient maintenance strategies.

The benefits

As a result of the risk analysis carried out, Essex Highways have achieved a remarkable cleansing reduction of 40% having optimised operational functionalities and more effective resource allocation across the network. They have also seen substantial financial savings of over £90,000 per annum. By seamlessly integrating all of Essex's assets onto a unified platform, Essex Highways' can now be assured of long-term asset sustainability and adaptability. This future-proof approach guarantees that the system evolves alongside infrastructure requirements, safeguarding investment and enhancing operational resilience for the entire lifecycle of each asset.

"The outcome based approach of map16 has allowed us to transform the drainage service in Essex...The move to a risk-based cleansing approach has so far saved Essex over £250,000"

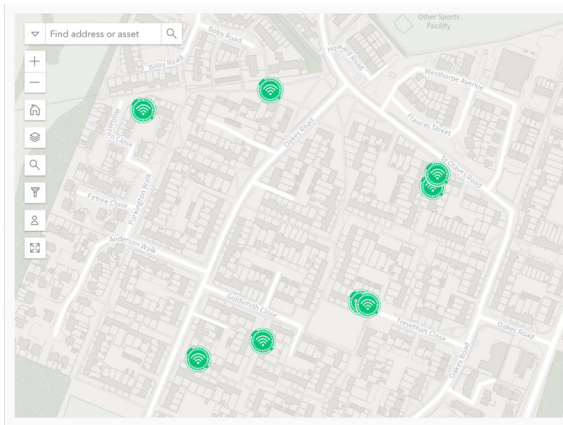
Will Young
Innovation and Efficiency Manager
Essex Highways



In the field

Whereas previously all data collected on site was manually entered through multiple, time consuming systems, the map16 inspection forms now auto-populate at lot of data, meaning the engineer's primary function is doing the inspection works, not completing paperwork. Crews can now also massively improve health and safety validity with photo uploads directly into the relevant forms, proving they've done essential tests, and showing works have been completed to the standard expected.

Crews are able to increase efficiency when in the field as the system allows Anglian Water to identify jobs within a close vicinity to each other, and can complete multiple jobs during one visit, saving the company time and money. Full inspections are carried out, including CCTV works, jetting and the installation of a monitor as a proactive approach to ensure the network is running smoothly.

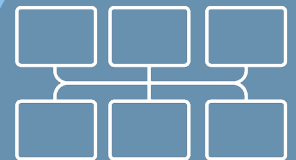


127,000
metres of unknown
sewer found and
inspected



Achieved twice the
amount of works
within budget

1,629
previously unknown
blockages discovered



6 systems in 1