

Greater Anglia and Network Rail work together to minimise leaf fall impact

October 27, 2022



Autumn is well and truly underway, which only means one thing – leaves on the line.

Working together every year to try and minimise the effects of leaf fall on train performance, they are aiming to improve on what were Greater Anglia’s best ever results last year – with a reduction in delay minutes due to slippery rails and fewer cancellations compared to the previous year.

During autumn 2021, Greater Anglia’s overall punctuality score was 94.48% from 19 September 2021 to 8 January 2022, making it the best autumn yet for the train company.

Delay minutes were down 19.5% in autumn 2021 compared to 2020 and 84.5% compared to 2019. There were just 2.5 cancellations due to autumn weather in 2021. In 2019 there were 48.5.

Greater Anglia’s new trains have been credited with handling the challenges of the leaf fall season significantly better than the operator’s old fleet.

Greater Anglia’s engineering director, Martin Beable, explains, “Most trains are fitted with a system called

'Wheel Slip Protection - or WSP. This is the equivalent of the ABS system you have in your car and prevents trains from skidding which can damage their wheels.

"Our brand new intercity, regional and electric commuter trains are fitted with the very latest Wheel Slide Protection systems which have been thoroughly tested and developed to be optimal.

"This means that any sliding on greasy rails - with lots of leaves compressed on the top of the rail - is limited and causes less damage to the wheels and track."

Leaves on the line can pose problems for the railway as they stick to damp rails and passing trains compress them into a thin, slippery black layer on the rail which - much like black ice on the roads - can affect braking distance and reduce traction and acceleration.

With this slippery surface to contend with, train drivers must slow down earlier for stations and signals to avoid overshooting them. They must also accelerate more gently to avoid wheel spin. All this can increase journey time and lead to delays for passengers.

When it is necessary, the trains also deposit a small quantity of sand onto the rail which helps the train wheels to grip, particularly where there is leaf contamination. Train drivers can also deploy the sand manually as a preventative measure when they are approaching leafy areas, to keep services running smoothly.

This year Greater Anglia has also started using cameras in train cabs to record footage of trains' journeys - the video is then analysed using AI technology to highlight areas of problem vegetation and produce maps used by Network Rail's vegetation clearance teams. The aim is to deal with potential problem areas before they start causing delays.

In addition, Network Rail has already deployed its team of six 'leaf busting' Rail Head Treatment Trains (RHTTs) which will operate 24/7 blasting leaves off the lines with high pressure water jets.

Together they will clock up over 80,000 kilometres from 26 September until 16 December to keep rails clear across Norfolk, Suffolk, Cambridgeshire, East London and Essex

Image credit: Greater Anglia / Video credit: Network Rail