

Image analysis to link suspects to criminal damage

Using GPS geo-location data embedded in images and videos from a mobile device to place offenders at the scene at the time of a criminal damage offence.

First published

9 April 2026

Key details

Purpose	Investigation cases
Topic	Criminal damage and arson Digital, data and analytics Investigation
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Start date	September 2023

Description

Northumbria Police received a report of criminal damage to a sycamore tree that had been felled, which also caused associated damage to Hadrian's Wall. The tree in question was the iconic Sycamore Gap tree located near Once Brewed village in Northumberland. Examination of the scene showed that a wedge of wood had been removed from the tree, which was missing.

On 31 October, Northumbria Police, supported by Cumbria Constabulary, attended the addresses of two suspects who were arrested on suspicion of criminal damage, and their addresses were

searched under [Section 32](#) of the Police and Criminal Evidence Act 1984 (PACE).

Mobile telephones belonging to the suspects were seized and examined using the Cellebrite kiosk download. Several significant images and a video were identified that were believed to be linked to the offence.

Line of enquiry

Using specialist digital techniques, GPS and geolocation data embedded in the video confirmed that:

- the video had been taken by the mobile device it was found on
- the video was taken at Sycamore Gap at the relevant time of the offence

The data for the still images, showing a large chainsaw and wedge of wood, were confirmed through geolocation to have been taken at the address of one of the suspects.

This address was searched and a black Range Rover identified as having travelled into Northumbria on the night in question was also seized. Images taken of the boot area of the vehicle were compared to images showing the wedge of wood and chainsaw, which had been taken from the suspect's mobile phone. It was established that these images matched the boot space of the suspect's vehicle because of a distinctive crack in the plastic boot-catch surround.

Specialist assistance from the National Crime Agency demonstrated that the wedge of wood was a physical match to the missing section of the Sycamore Gap tree and that the image was taken in the boot space of the seized vehicle.

Outcome

Both suspects were subsequently sentenced to four years and three months in prison.