



# Torbay Council Extends Trial of AI Based Road Condition Assessments

## Introduction

Torbay Council oversees a diverse road carriageway network of over 500 km, situated in the picturesque South Devon Region, with Devon County Council as their neighbouring authority.

Each year, the Council undertakes SCANNER and SCRIM surveys to comply with the Department for Transport (DfT) standards and secure funding for road maintenance.

However, assessing the condition of the unclassified (U Class) network proved challenging due to resource constraints and the absence of cost-effective, scalable solutions. To address these challenges and improve operational efficiency, the Council sought innovative approaches.

## Innovation Trial

Highways Asset Management at Torbay Council is managed by SWISCo, a Torbay Council company.

In November 2023, Ian Jones, the Head of Highways at Torbay Council procured a 12-month innovation trial of RoadMetrics AI.

This project was led by Christopher Lazenby, Highways Service Manager at SWISCo.

## Trial Objectives

- Evaluate the accuracy and ease-of-use of the RoadMetrics AI system,
- Reduce subjectivity in condition assessments and identify potential cost-savings
- Meet the developing requirements of the DfT's PAS2161 New Data Standard.

## Solution

RoadMetrics provided Torbay Council with a tailored, cost-effective solution that met their specific requirements for road condition and asset mapping. Using the RoadMetrics Data Collection App, the Council's internal staff could easily conduct surveys with minimal setup.

The collected data was securely uploaded to RoadMetrics' cloud servers, hosted on AWS in London, ensuring both safety and accessibility.

The system provided automated road condition ratings based on the DfT's guidelines and captured asset data.

The system offered advanced analysis tools for quick data processing and visualisation, allowing seamless integration with existing GIS systems, including MapInfo GIS and WDM UKPMS.



**Pre-built graph tools** for publishing comparative data effortlessly.



**High-quality video and photographic** outputs for detailed assessments.



**Bluetooth tagging** for critical defects and points of interest in real time.



**Lifecycle cost estimation calculators** for actionable insights in maintenance planning.

## Implementation

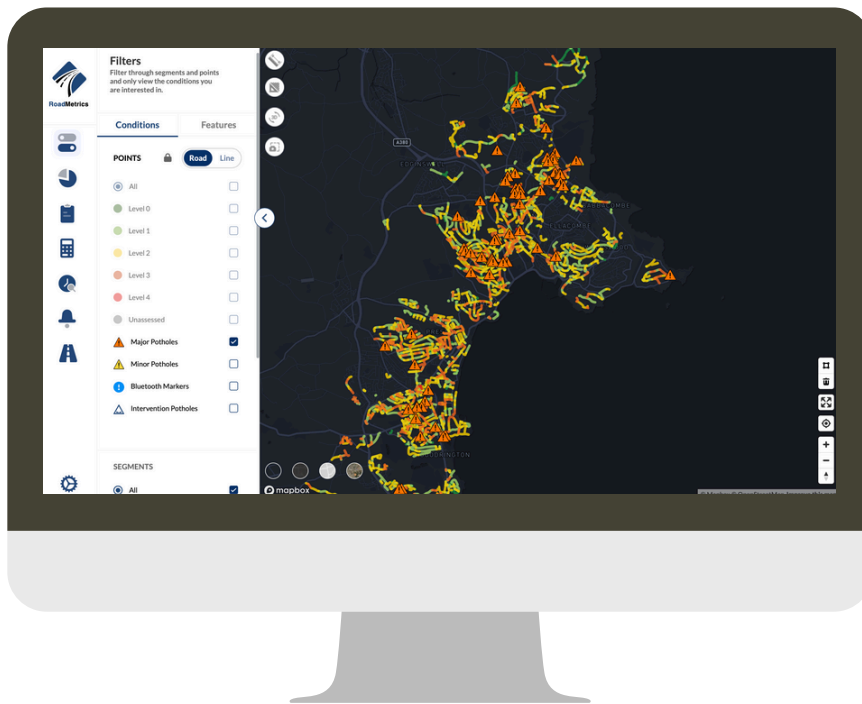


The implementation of the system involved surveying 200 km of roads across Torquay, Paignton, and Brixham, covering a range of urban and rural conditions between February 2024 to August 2024.

The smartphone-based solution was identified as user-friendly, enabling quick adoption by the Council's internal staff. Data was collected efficiently, uploaded seamlessly to the cloud using the app, and processed with a turnaround time of 8 hours.

The trial helped overcome some of the inherent challenges of traditional methods, such as:

- Long turnaround times and limited information with manual coarse visual inspections (CVI).
- No automation and need for multiple site visits.



## Options for Implementation

Torbay Council have decided to further extend the trial for 200 km in FY25/26. Upon a successful trial, potential options to fully implement the system include,

- Equip all highways inspectors with data capture devices for continuous monitoring of road condition for forward works programmes
- Annual audit of highways assets and submitting road condition data for the DfT

*We were happy that the site was easy to use and had plenty of functionality for easy assessment. The prebuilt graph tools were useful in the quick publication of compared data. The data analysis was quick and meant we could use and publish data throughout the survey period. The data could be extracted into formats we could easily integrate into current systems such as MapInfo GIS and WDM UKPMS. The video and photograph quality were excellent and useful in further analysis.*

*– Christopher Lazenby, Highway Service Manager, Torbay Council*



## Conclusion

As Torbay Council/Swisco continues to align with the DfT's PAS2161 New Data Standard, this innovation trial has laid a strong foundation for integrating AI into long-term infrastructure planning and management.

Encouraged by these results, the Council has extended the trial to include an additional 200 km of unclassified roads, marking a step forward in expanding the usage of this technology.