RoadMetrics
CASE STUDY

BCP Council Extends Trial for AI Based Road Condition Assessments Across their Entire Road Network

About BCP Council

BCP Council is located on the south coast of England, covering Bournemouth, Christchurch, and Poole. Formed in 2019, it serves a population of over 400,000 residents. The council is responsible for managing just under 1,250 km of road network across the urban and coastal areas. BCP is known for its beautiful beaches, tourism economy, and thriving digital sector. The council operates under a unitary authority system, delivering both county and district functions.

Challenges

The Highways Asset Management Team felt that they had difficulties obtaining accurate and consistent road condition data when using traditional methods for condition surveys. Further, the process of data collection was time consuming, with less flexibility for ad-hoc surveys.

Trial Objectives

- Meet the requirements of the DfT's New Data Standard—PAS 2161, for road condition reporting.
- Streamlining inspections, by allowing for safer desk based work and reducing the need for frequent site visits.
- Provide consistent and accurate road condition data, with a quick turnaround time.

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Solution

After a presentation with their Highways Asset Management Team in April 2024, a trial was commissioned to utilise one RoadMetrics hardware kit for data collection. One inspector was assigned for the same. The Pilot trial assessment was performed in June 2024, for a road network length of 200 km.

This helped them understand the benefits of the AI system in the following ways:

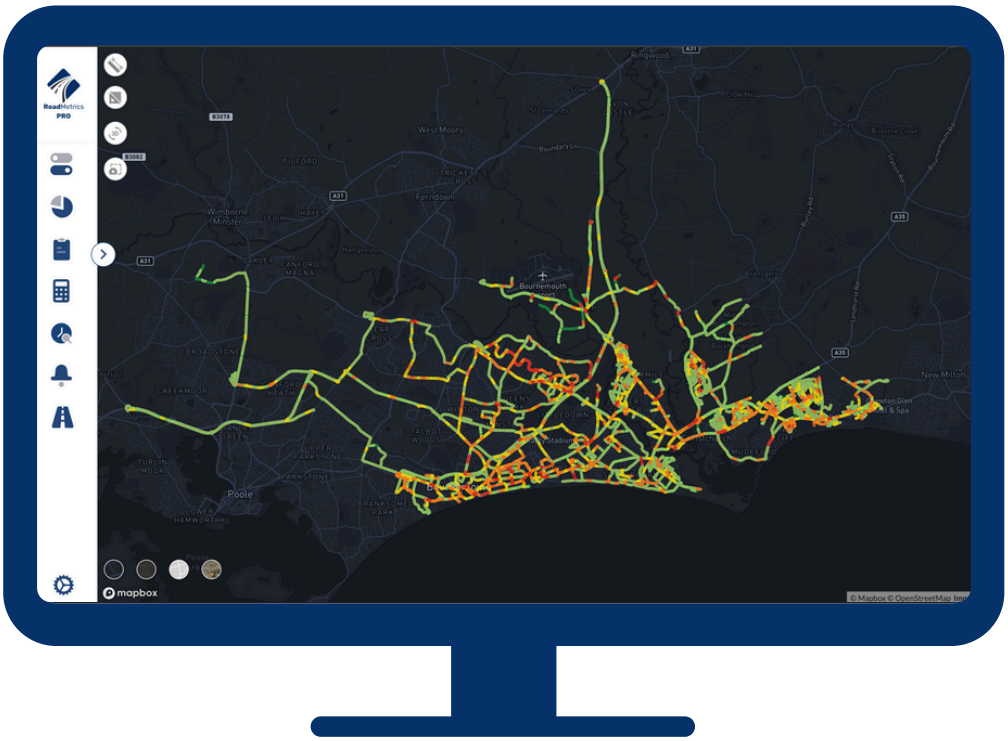
- quick visualisation of road defects on a GIS layer,
- objective RoadMetrics condition ratings (RMI) with High Definition video footage and imagery.

Implementation

BCP council opted to extend the trial to survey another 600 km from the month of September 2024, while continuing to use one hardware kit, relayed between highway inspectors.

In February 2025, RoadMetrics helped the council transition to RoadMetrics PRO, allowing them to assess road line marking condition and a comprehensive image-by-image analysis with road defect annotations.

In April 2025, a decision was made to extend their contract with an annual license for 500 recording hours and an additional 4 hardware kits for a total of five inspectors, to cover their entire road network of 1,248 km.



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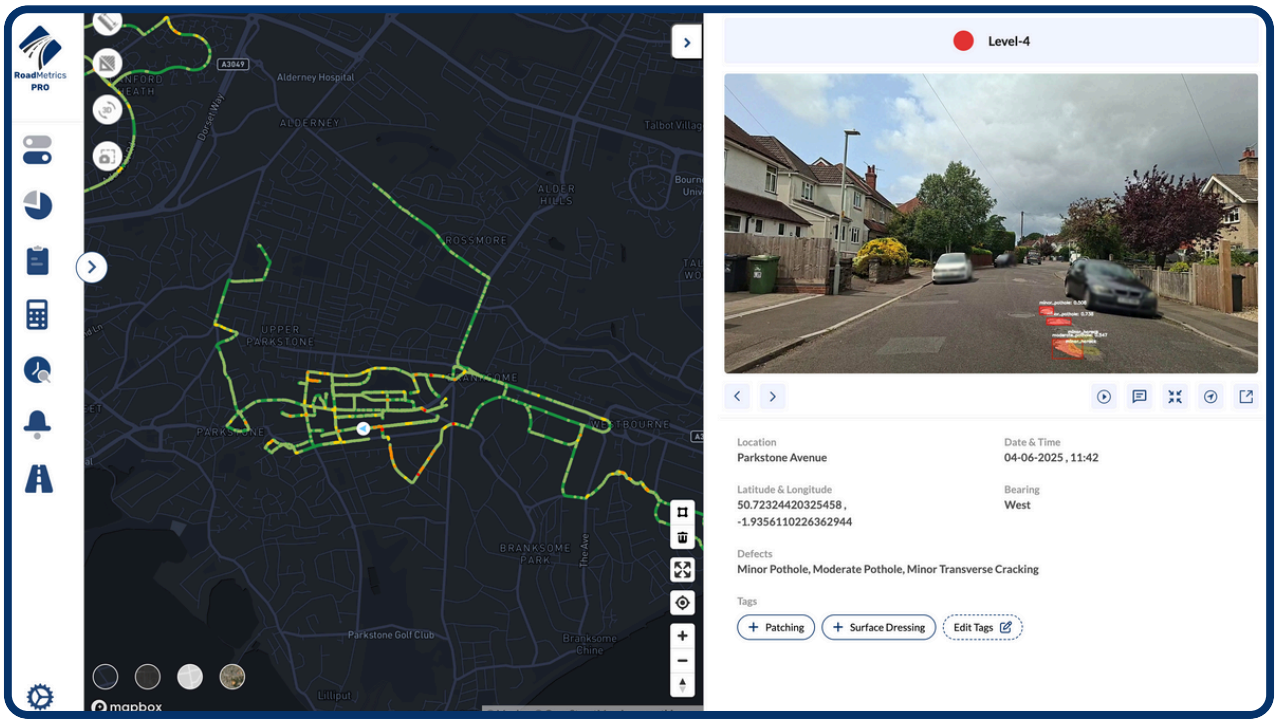

Benefits

Streamlined Inspections

Reduced site visits enabling improved inspection efficiency

5-Level Condition Score

Objective road condition ratings with high quality video and imagery

Quick Turnaround Time

Single day processing to enable quick data-driven road maintenance decisions

BCP Council

"RoadMetrics has been a revelation to us. The road condition information being provided is up to date and extremely useful in providing a level of granularity that we've simply not had before using traditional methods. We are finding it very useful for targeting our surface treatment programmes given there is the ability to highlight areas of the network with various degrees of cracking. The very high quality video footage helps us save time and has enabled some queries to be resolved at desktop without the need to physically visit the site.

We are seriously considering adopting this system for road condition surveys of our U road network and possibly B and C roads"

-Stuart Priest, Highways Maintenance Team Leader

Results

With the results from the trial, BCP Council were able to find value in using the system for their road maintenance efforts.

Using RoadMetrics AI, the council were able to receive an objective assessment to build their road surface treatment plans.

It was indicated from the trial that around 1% of road network surveyed required significant repair, while a further 3.5% required attention, and the rest requiring varying forms of intervention, but in overall good condition.

Future Developments

- Addition of “Section IDs” to enable customised reporting for BCP Council.
- Utilise the system to extract road condition reports for DfT submission using PAS 2161.
- Continuous data uploads to further understand the system's repeatability and accuracy in various weather and lighting conditions.
- Investigate change in road network condition from the previous years in building long term highway maintenance plans.

Conclusion

BCP Council have now successfully performed road condition surveys for a total of 800 km utilising RoadMetrics enabled smartphones and hardware for data capture, and have further extended their trial contract for a period of 12 months, ending in March 2026.

Going forward, the council is interested in adopting the system to conduct road condition surveys of their U road network, and possibly B and C roads, after successfully rolling out the system during the trial period.