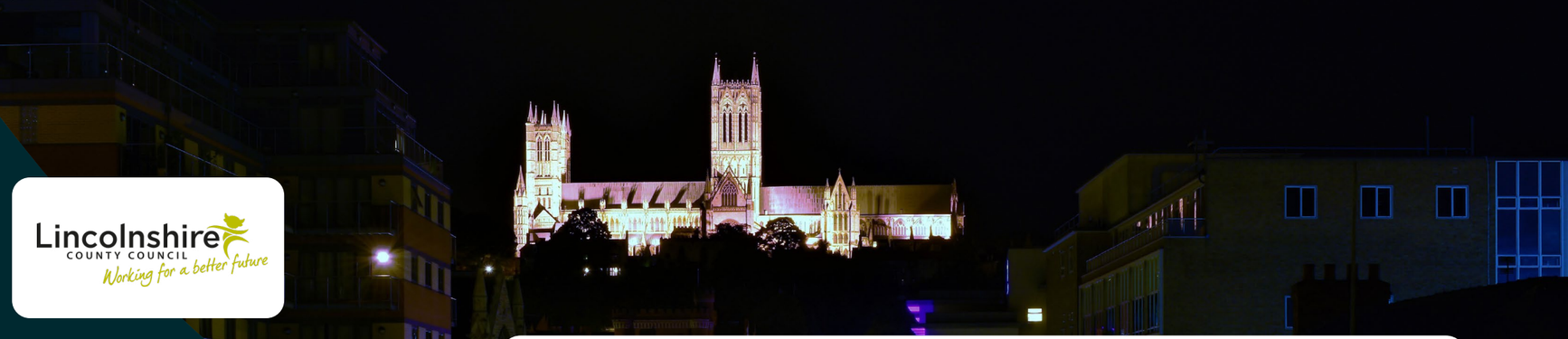
Case Study

Lincolnshire County Council: Delivering a digital approach to traffic management and network optimisation



About Lincolnshire County Council

Lincolnshire, at 5,921 km², is the fourth largest county in England and home to both the historic city of Lincoln and Skegness, the fourth largest coastal tourism resort in the UK, making Lincolnshire County Council (LCC) responsible for a diverse and busy over 5,000km of road.

With a growing university, a variety of market towns and large rural and agricultural areas, the Lincolnshire road network requires careful monitoring and expert coordination. LCC rely on one.network to help them keep residents and drivers up-to-date and disruption on the roads to a minimum.

Ashley Behan, Street Works and Permitting Manager at LCC manages a team of 30 Street Works and Permitting Officers, all of whom use one.network on a day-to-day basis to help coordinate works on Lincolnshire's highways.

Balfour Beatty, Lincolnshire's contractors, also use the platform in their Operational Control Hub to track all activity on the road network, monitoring live traffic flow and delays.

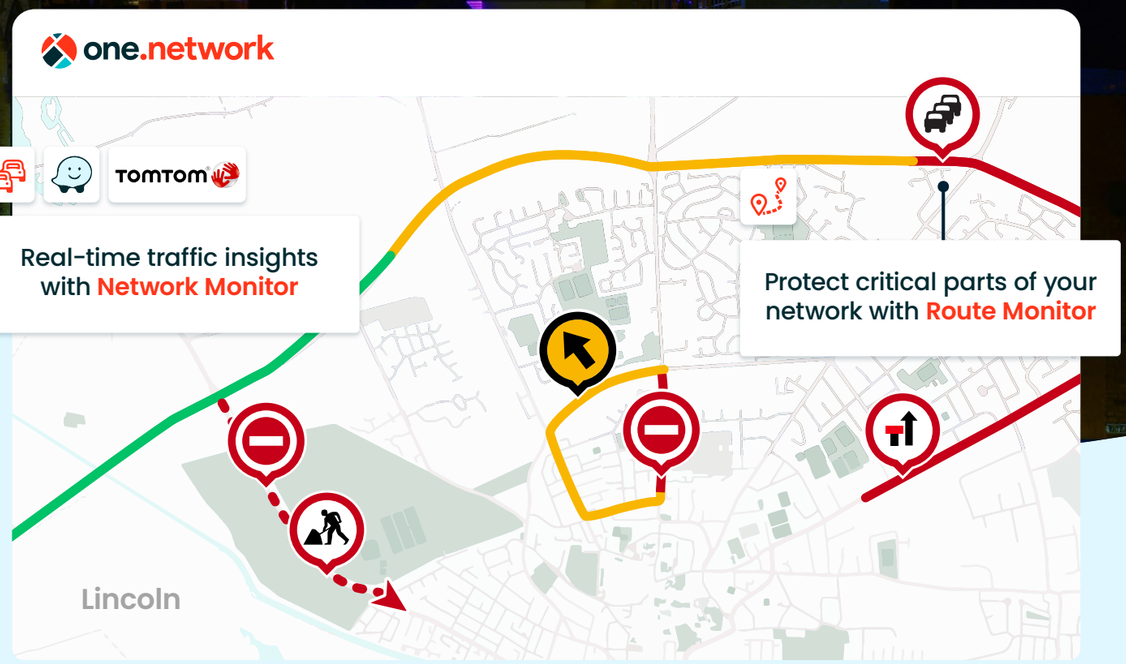
LCC is working to modernise its traffic management and network optimisation, and in doing so, meet the goals set out in its Local Transport Plan:

Minimise carbon emmissions

Reduce the impact of traffic on communities

Maximise the **reliability of journeys**

Improve **citizen engagement**



Tackling Lincolnshire's Carbon Emissions

40% of Lincolnshire's carbon emissions are transport related, with 1.46 million tonnes of CO_2 emitted from transport each year. Therefore, a Carbon Neutral target by 2050 has become a central goal for the council. Key to reaching this goal, is monitoring and preventing congestion.

LCC use one.network's Network Monitor and Route Monitor modules to detect delays on the roads across the county which may be contributing towards carbon pollution levels. With this technology, the council has been able to create pre-determined Red, Amber and Green traffic flow thresholds based on normal conditions for the time of day and day of the week. When traffic flow dips below this threshold, an instant alert is triggered, notifying the council that the route is running slower than expected.

These real-time alerts mean that inspections in affected areas can be prioritised. Street Works Officers can immediately investigate to identify the cause of the congestion – whether that be by visiting the site or speaking with the Utility Supervisor to ensure there is proper manual control around a work site in the area.

By speeding up the identification of congestion, LCC can more quickly mitigate delays, which helps reduce congestion related carbon emissions, supporting Lincolnshire's Net Zero objective. Additionally, receiving real-time alerts via the one.network platform, reduces the need for council staff to constantly monitor the network, freeing up capacity for more beneficial tasks.

Analyse past incidents & plan for the future with **Traffic Replay**

Stationary Traffic

Incident started 10 June 14:44

Nettleham Road

Information for road users

Traffic Delay:	3 mins
Average Speed:	4 mph
Traffic Disruption:	Stationary Traffic
Traffic Delay Timestamp:	10/06/2022 17:05

Data Source: TOMTOM

Reducing Traffic Impact on Communities

LCC also subscribe to Traffic Replay to assist with network optimisation.

Traffic Replay provides the council with the ability to visualise and analyse historical traffic patterns anywhere across Lincolnshire. With this insight, the council can better investigate public reports of disruption. Causes of traffic, such as unpermitted works, can be quickly identified and complaints can be resolved faster.

Ashley Behan, Lincolnshire's Street Works and Permitting Manager, told us about a particular instance that took place on the A17 – Lincolnshire's busiest road:

"We received a customer complaint about some disruption which, unfortunately, meant they had missed a hospital appointment.

Initially, we could find no evidence of a permit but by using Traffic Replay, we were able to rewind back in time and identify that there were some works taking place in the area. After further investigation, we identified that a utility company had been performing unpermitted works.

Previously, with public queries or complaints such as these, all we could say was "There's no record of any works at this location. Can you tell us more about what you saw?" Instead, we now have the data to evidence customer complaints, allowing us to get to the bottom of problems and provide more satisfactory results for customers.

This means we're saving time, costs and resources and can meet our 10-day response target. Additionally, we're able to easily locate and rectify unpermitted works and Section 74 overstays."

Maximising Journey Reliability

By using the platform, LCC has also been able to understand how historical roadworks impacted traffic flow. This enables the Street Works and Permitting team to take a more modern approach to traffic management, applying past learnings to future plans.

For example, Traffic Replay played a crucial role when the team received a request for extended enforcement times, and a longer permit duration for 4-way temporary traffic lights on a traffic sensitive A road, at a roundabout.

By analysing past traffic flow, LCC was able to provide evidence that the work was already causing significant disruption, with queues up to a mile and a half long in every direction – even during "off peak" hours.

This insight meant a more appropriate solution was put in place to ensure the works could be completed more efficiently with as little disruption as possible.

Overall, Network Monitor, Route Monitor and Traffic Replay together have allowed Lincolnshire to reduce congestion across the network, and even prevent instances of disruption before they occur, resulting in a faster flowing network and more reliable journeys.

Improving Citizen Engagement

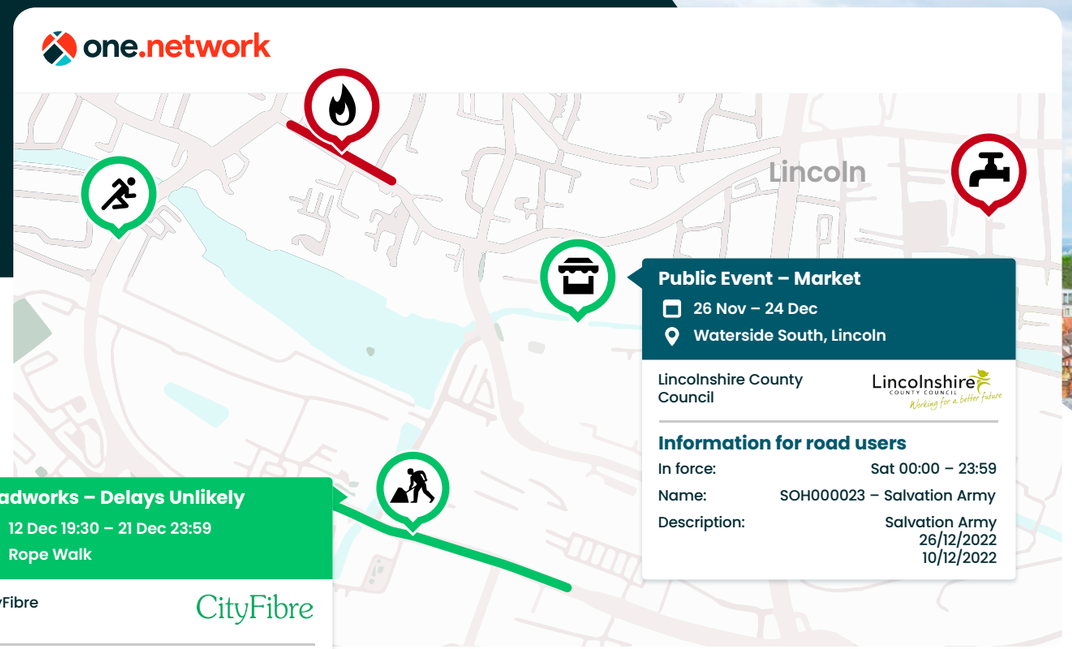
Lincolnshire's Councillors have collaborated with Balfour Beatty on a Highways Customer Strategy to improve citizen engagement and communication with stakeholders. This resulted in the decision to deploy one.network's Content Management solution.

Now, within the one.network map, all street works jargon is automatically translated into positive, easy-to-understand language for the public. LCC can update works with the latest information at any time, as well as add direct links to the LCC website, attach information leaflets for works, such as surface dressing and even provide contact details for relevant staff.

This means that Lincolnshire's citizens are better able to self-serve, reducing burden on Councillors and other teams across LCC who now receive less inbound queries from the public.

When customers do get in touch with questions, Councillors can also more efficiently respond to queries from the public, with easy access to the information to detailed roadworks information.

To further empower residents and stakeholders, Lincolnshire is also looking for more ways to aid and encourage self-serving, including adding links to all council letters and emails and directing the public to the online map via physical road signs.



Collaborating Across Boundaries

With a duty to ensure traffic management doesn't impact surrounding counties and boroughs, collaboration is essential for Lincolnshire.

Fortunately, this is made simple with one.network; LCC can see where works are taking place in surrounding areas, whether they are being conducted by an authority, a utility or a contractor. This means plans and permits can be adjusted to ensure limited disruption to nearby counties.

Working collaboratively with utilities is particularly important to Lincolnshire.

"We pride ourselves at Lincolnshire County Council on having good relationships with utilities. one.network is helpful in aiding this. It provides us with visibility of all works and road closure plans booked, so that we can better collaborate.

We encourage all utilities working in Lincolnshire to use one.network for their planning."

Ashley Behan
Street Works and Permitting Manager
Lincolnshire County Council

Creating Better Outcomes for Events

The county of Lincolnshire hosts a total of 450 events every year, including the Lincoln 10k the Boston Marathon and Lincoln City football matches. These events, while bringing significant tourism and economic benefit for the region, attract big crowds and heavy traffic.

Similarly, Lincoln University move-in days created an increased pressure on the network with extra vehicles on the road. Sometimes these events even take place on the same day, and so, careful management is required to ensure limited disruption. LCC plan and coordinate the road closures and diversions necessary for these events and then communicate them to the public, all via one.network.

Sharing the closures online in advance means the council can provide residents, spectators, participants and drivers with the information they need to navigate Lincolnshire and avoid delays during these busy events.

Additionally, LCC always strives to ensure safety is at the heart of its event planning. Alongside attending 80 Safety Advisory Groups a year, Lincolnshire helps the public to stay informed and travel safely, to, from and around events, by providing easy access to digital, accurate, up-to-date information on one.network.

Lincolnshire COUNTY COUNCIL
Working for a better future

Supporting the Local Transport Plan

Being able to invest in the right tools and processes has provided Lincolnshire with the capabilities to support their main objectives laid out in their Local Transport Plan.

Improving diagnosis, response and resolution of congestion to help reduce carbon emissions.

Leveraging historical data to better plan for events and minimise traffic impact on communities.

Providing a better digital experience for the public to self-serve information, reducing inbound queries.

Taking a holistic approach to planning, coordinating and communicating traffic disruption via a single platform to reduce impact on journey times.

one.network

For further insight into how Lincolnshire and other authorities are using **one.network** to transform their traffic management and optimise their networks...

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