

Oxfordshire County Council's Resilient Network

A Definition

Introduction

Why have a Resilient Highway Network

A 'Resilient Highway Network' is defined as a sub-area or major Strategic Routes of the Local Highway Authorities Network that are vital to maintaining economic activity and access to essential services during extreme weather emergencies and other major incidents.

Oxfordshire County Council (OCC) have always applied a form of 'resilience' to their Highway Maintenance with current practices, implemented through the use of our Maintenance Hierarchy within the Transport Asset Management Plan and our Winter Service Plan.

Following the Department for Transport (DfT) recent revision of the Well Maintained Highways – A Code of Practice, a more defined Resilient Highway Network has been established.

As the Local Highway Authority, OCC is responsible for the construction and maintenance of the Local Highway Network including Carriageways, Footways, Structures, Drainage, Street Lighting and other key Highway Assets. By defining a Network Resilience Plan, OCC will look to prioritise Capital Maintenance Programmes on that part of the Highway Network and in turn improve Oxfordshire's resilience against extreme weather and other emergency events.

Oxfordshire has an intensively used roads network, meaning that any disruption is potentially felt very quickly by large amounts of people. Ensuring these roads are as resilient as is practicable must be a priority. Resilience in this context is the ability of a road network to withstand not only the impacts of extreme weather (snow, ice or flooding) but also industrial action, major incidents and other local risks. It should therefore be maintained in a condition that makes it more resilient to failure and allows it to recover promptly from the effects of these events.

If there were unlimited budgets the resilient network could be considered to be all roads in the county however this isn't the case. Therefore, the level of resilience sought for any length of road needs to be commensurate with its intensity of use, economic or social importance and the availability of alternatives. The more intensively used and economically or socially important a route is, the shorter the disruption that is acceptable.

Our Approach to Managing Highways for Resilience

OCC have developed an internal Resilient Forum where the Highway, Emergency Planning and Transportation Team met to discuss the aims of the Resilient Network.

These aims are-

- Economic Growth – a resilient and reliable transport network essential to supporting key local economies and encourage future growth;
- Safety – under extreme cases, maintain a key part of the Highway Network that is safe for public use.
- Cost Saving – reducing the need for the more costly alternative of Reactive Maintenance on this part of the Network unless absolutely necessary.
- Keep Oxfordshire Moving – this aim is linked directly to our corporate objectives.

Oxfordshire County Council (OCC) has robust systems in place to effectively take a tiered approach to the management of our 2,750 miles of highway network. Routine maintenance and investment is prioritised based on a maintenance hierarchy that has been developed in accordance with the National Code of Practice but with a number of amendments which take into consideration: environment (urban/rural), traffic usage and local functional factors.

We use the hierarchy to determine the Winter Maintenance Network, which defines the precautionary salting routes and totals about 1200 miles (1920km) or 40% of the whole highway network. It includes all MS, OS and LI routes. There is a further refinement of this network, Priority 1 and Priority 2, which determines the priority routes that are to be kept open in the event of a prolonged snow emergency. This network is around 400 miles (650) in length, about 13% of the total network.

OCC has a Severe Weather Plan which sets out how we will respond to and manage the effects of severe weather events including snow, ice, wind, rain and flooding.

Our Resilient Highway Network

As an organisation we plan for winter and severe weather events to ensure we are prepared and react effectively to any abnormal conditions. Our Resilient Highway Network is defined as the portion of our highway network that is absolutely vital to maintaining economic activity and enabling access to key services during these extreme weather emergencies and other major incidents. The defined network identifies the *most* critical routes and associated highway assets, so that planned maintenance on that part of the network may be prioritised. This ensures that our defined Network is less prone to failure and ensures the county's resilience to extreme weather events, industrial action and major incidents.

The overarching aims of Oxfordshire's Resilient Highway Network are;

- to protect economic activity in and through the county;
- to protect access to key services; and
- to protect access to key infrastructure.
- to keep Oxfordshire moving.

To achieve this we have used the following criteria to identify and map a network of our most critical routes and highway assets;

- roads connecting main towns in the County of Oxfordshire with a population of 20,000 and above,

- roads connecting main towns with Highway England's Strategic Road Network and associated strategic diversion routes
- roads connecting main towns with main employment sites,
- roads connecting with key operational services requiring emergency public access, such as hospitals with Accident and Emergency facilities,
- roads connecting with key infrastructure, such as power stations, Highway depots and main transport facilities.
- roads that form the strategic bus route network within Oxfordshire
- roads that form access routes to Secondary schools
- roads that form access routes to Care homes and emergency evacuation centres
- roads that form part of the repatriation route from Brize Norton to the John Radcliffe Hospital
- roads that form access to the Environment Agency's emergency flood structures

Implementing our Resilient Network

OCC will implement the Network Resilience Plan through:

- Targeting investment through the annual Capital Works Programme for Carriageway, Footway, Structures and Drainage;
- Fast-tracking any reactive works that may occur on the Resilient Network to maintain network flow;
- Review intervention levels to avoid disruptions on the Highway Network, e.g. increasing drainage cleansing on the Resilient Network.
- Fast tracking any works already in the programme to reduce the risk of failure of the asset.

How we ensure our Resilient Highway Network remains relevant

Our Resilient Highway Network is reviewed by OCC's Infrastructure Delivery Team at least every two years and after any major event to ensure it remains relevant as lessons are learnt and services and businesses within the County change.

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