

Coventry City Council Resilient Network

Introduction

It is now recognised that climate change is affecting weather patterns. In the UK, this is reflected through greater incidence of prolonged rainfall, strong winds and heatwaves which can combine with other natural events to create adverse conditions for the Councils transport network. Where practical, there is a need to make the Councils transport networks more resilient to such events.

In recent years prolonged and heavy rainfall has caused disruption to the Coventry transport network, this included road closures and train delays. Coventry's University Hospital temporarily closed two flooded car parks, and many properties were flooded. Since 2012 there have been similar severe weather events which have had a significant impact on individual people, communities and infrastructure.

The cost, damage and disruption that extreme weather can cause to homes, businesses and vital services cannot be under estimated.

The increasing frequency, variety, and impact of these extreme weather events prompted the Department for Transport (DfT) to undertake a review of the resilience of the UK transport network to extreme weather events. This review recommended that local highway authorities should identify their resilient network and give it priority consideration in terms of maintenance and availability.

The Council recognise that change is necessary and have already produced key documents that look to address climate change issues, these being the Local Flood Risk Management Strategy, and the Climate Change Strategy for Coventry 2020. Further work is now considered necessary to establish Coventry's Resilient Network.

What is a Resilient Network?

Resilience in the context of this review can be described as the ability of the transport network to recover from planned or unexpected weather events and return to providing the required level of service for customers. It is about increasing the physical resilience of transport systems to extreme weather, so when extreme weather is experienced the transport network continues to function.

DfT Transport Resilience Review

In 2014, the Department for Transport (DfT) undertook a review of the resilience of the UK transport network to extreme weather events. A number of recommendations were made as a result, in both the short and longer term. The key recommendation for local roads is;

"that Local Highway Authorities identify a 'resilient network' to which they will give priority, in order to maintain economic activity and access to key services during extreme weather."

This recommendation aligns with this Councils wider strategies, including the Winter Service Plan, Local Flood Risk Management Strategy, and the Climate Change Strategy for Coventry 2020. The latter details the strategy for adaption to the future impacts of climate changes.

Coventry, Solihull and Warwickshire Resilience Team

Coventry City Council, Solihull Metropolitan Borough Council and Warwickshire County Council have a shared service agreement for Resilience and Emergency Planning. The authorities have committed to working together on resilience matters across the sub-region and have agreed mutual aid arrangements in place. The arrangements and structures outlined in this plan are replicated across the sub-region to support succinct and efficient lateral communication between authorities.

Coventry's Resilient Network and methodology

In terms of the DfT Transport Resilience review the Council have developed a Resilient Network (RN), based on the requirements for Winter Service and the Local Flood Risk Management Strategy. This provides priority to the two greatest risks to the highway network, snow/ice and flooding. In addition to this Coventry's RN incorporates the requirements of key infrastructure.

Defining the Resilient Network

Highways Priority Routes

As a starting point the winter service gritting network (map below) has been used as the basis for the resilient network as it includes well established known routes that are important for safety, accessibility, and economy of the area.

Flood Risk Areas

Coventry as a Lead Local Flood Authority produce flood risk maps which identify areas susceptible to surface water flooding.

Critical Local Infrastructure

Routes providing access to the Council's critical infrastructure (which is defined as those facilities, systems, sites, property, information, people, networks and processes, in which the loss or compromise would result in major detrimental impact on the availability, delivery or integrity of essential services, leading to severe economic or social consequences or to loss of life) have been reviewed and incorporated as part of the RN.

Emergency Facilities

The emergency services have a critical role in responding to incidents 24/7 and therefore it is critical that routes providing access to Fire Stations, Police Stations, Ambulance Stations and Hospitals are prioritised to ensure the health, safety and security of the public.

Transport Infrastructure & Facilities

The local highways network is one component of a larger transportation network including; the Highways England Strategic Road Network (SRN), and the West Midlands Key Route Network (KRN). The local roads network can form a key link between other modes of transport and therefore its role in facilitating access to these networks has been considered as part of the development of the 'Resilient Network'.

Economic Significant Sites

The 'One Coventry' initiative highlights the importance that is placed on support and developing business within the local area. The identification of major business centres or significant local employers will be important to capture within the wider considerations of the 'Resilient Network' providing another reason for businesses to operate from Coventry.

Neighbouring Sites

The local roads network supports the wider West Midlands and therefore there is a requirement to consider key sites located close to the border or that are dependent on access through Coventry.

Business Continuity - Local Priorities

In the event of a business continuity disruption to Coventry, the local authority business continuity arrangements identify the key services that need to remain operational. Service level plans will detail critical functions and the support services (including premises) that are required to continue delivery of critical services.

The Coventry, Solihull and Warwickshire (CSW) Resilience Team is responsible for the development of a range of emergency plans, the team also holds details of historic incidents which identify additional critical locations on the network which have been considered as part of the resilient network.

Climate Change

The further development of the resilient network will directly support the already published Coventry City Council Climate Change Strategy, which sets out how the authority aims to become a resilient, sustainable and low carbon city.

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Coventry City Council

The City of Coventry Resilience Network

-  City Boundary
-  Key Route Network
-  Principle Gritting Network

Areas Susceptible to Surface Water Flooding

-  More Susceptible
-  Intermediate Susceptible
-  Less Susceptible

1 kilometre grid

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