

Resilient Network Strategy

Newcastle City Council

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Document Information

Title	Resilient Network Strategy
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Description	This document details how the council has created a resilient network, how it is maintained and details which roads form part of the resilient network.

Document History

Version	Status	Date	Author (s)	Changes from Previous Version
1.0	Draft	15/03/24	Dave McCourt Michael Richards	Not applicable
1.1	Revised after review	20/03/24	Dave McCourt Michael Richards	Content changes following cabinet meeting.
1.2	Final	25/04/24	Dave McCourt Michael Richards	Content remains unchanged following review at Scrutiny meeting, final document agreed.

Version	Status	Date	Authorised for Issue by:
1.2	Final to publish	29/04/24	Pamela Holmes, Assistant Director Transport

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Background

Following the impact on the highway network of a succession of severe events, the Department for Transport (DfT), in 2014, produced the document *Transport Resilience Review: A review of the resilience of the transport network to extreme weather events*. Furthermore, the Highways Maintenance Efficiency Programme (HMEP) developed a selection of products and services that promote efficient and effective working practices. These resources have been developed and based on the existing good practice of highway authorities. The long-term implementation and management of the highway network is further supported by the new Code of Practice for Well-Managed Highway Infrastructure which provides additional structure in developing good practice. The Code includes Recommendation 20 – Resilient Network which states: “Within the highway network hierarchy a 'Resilient Network' should be identified to which priority is given through maintenance and other measures to maintain economic activity and access to key services during extreme weather”.

Introduction

The **Resilient Highway Network** provides the minimum network of roads which will be maintained within the boundary of Newcastle City Council in times of extreme weather and in the event of other serious incidents.

The resilient network will be given priority, in order to maintain safety, economic activity, access to key services and to enable the residents, businesses, and visitors of Newcastle City to go about their daily business in times of extreme weather, or other significant disruption.

Resilient Network Strategy

Newcastle City has identified a resilient network, which will be prioritised during periods of extreme weather or other significant incidents with regards to maintenance and other measures in order to minimise the risk to the City in terms of safety of road users, economy and access to key areas.

The highway network routes that form part of Newcastle City's resilient network are those routes, which are deemed essential to the highway network and do not necessarily follow road classification or road hierarchy as detailed in our Highways Asset Management Plan.

The resilient network sets out the following:

- Identifies the network routes that form the resilient network
- Identifies critical infrastructure
- Links to the City Council's Winter Maintenance Policy, i.e., the gritting routes that are part of the resilient route network.

In developing the resilient network, we have considered and ensured that it provides:

- Connectivity between major communities,
- Links to the strategic highway network,
- Connectivity across authority boundaries,
- Links to transport interchanges,
- Access to emergency facilities including Fire and Rescue, Police, Ambulance Services and Hospitals,
- Principal public transport routes,

Developing the resilient network

As the Local Highway Authority, Newcastle City Council 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 this Resilient Network strategy, Newcastle City Council will look to ensure that resources enable this Resilient network to improve resilience against extreme weather and other emergency events.

The process of developing a resilient network meant identifying main arterial routes across the city. The resilient network is mainly made up of Principal and Classified roads which carry main thoroughfares of traffic through the city, to key services and provide links to unclassified roads which also allow access to key services.

This network is essential in order to maintain vehicular access to key services and assist them in continuing during periods of extreme weather including prolonged cold conditions including ice and snow, flooding, high winds, heat waves as well as other major incidents both within our boundary and within adjacent Authorities.

Our Winter Services Policy was developed to allow the City Council to discharge its duties under the Highways Act 1980, whereas the resilient network is a much smaller network defined by the Department for Transport as being critical to the economic activity and service provision of an area in extreme weather.

The Department for Transport recommends that the resilient network should equate to less than 10% of the overall network and ideally 5%. Defining a resilient highway network that is significantly larger than that would be unaffordable and lead to less resilience as existing resource is spread more thinly. For those reasons, it is not appropriate to adopt our 'Winter Routes' defined in our Winter Services Policy as the Council's definition of our resilient network.

The Key Services identified in this strategy are as follows:

Police Stations,

Ambulance Stations,

Fire Stations,

Links to National highways defined resilient network,

Links to neighbouring authorities defined resilient networks,

Local Authority operational depots

- Newington Road – Location of critical highways teams.
- Condercum Road – Location of critical local services and cleansing teams.
- Sandhills – Location of critical harbour teams.
- Allendale Road – Critical housing services.

Weather events which are likely to cause disruption

Snow

Issues are likely to arise as part of snow conditions are reduced visibility, reduced surface friction, failure in road signals, roads becoming impassable due to snow and vehicular accidents.

Prolonged sub-zero temperatures

During prolonged periods when road surface temperatures are well below zero our 'Winter Routes are continually treated to ensure that they are kept free of ice and frost as far as is reasonably practicable. However, in the event that temperatures are so severe causing extreme conditions making it impossible to maintain the full winter maintenance network, the resilient network will be prioritised.

Flooding

A flooding event may result in the closure of roads and footpaths, therefore, to minimise the risk, Newcastle City has a dedicated flood management team who have consulted on flooding to understand which routes may be affected and considered alternative routes as part of the resilient network.

Heatwaves

Issues are likely to arise as part of any heatwave emergency, such as power failures and transport disruption, and these will be dealt with by the departments concerned as part of a coordinated response unless they became the overriding concern, in which case the overall central government department lead may transfer responsibility.

High winds

Issues likely to arise as part of high wind include fallen trees or branches, debris in the road, difficult driving conditions (potential increase crash risk), electrical failure.

Consultation on Weather warnings for high winds will provide information on the likelihood of driving in extreme dangerous weather the expectation of widespread uprooting of trees, widespread damage to buildings, with potential for severe structural damage.

Road bridges across the River Tyne may be closed during high winds with designated diversion routes in place.

Communication

This strategy document is available to view on extreme weather page of our website using the following link [Extreme weather | Newcastle City Council](#) and is directly linked to the City Council Highway Asset Management Plan (HAMP).

Links to this strategy are circulated around our internal teams as well as emergency services to ensure they have an up-to-date record of the minimum resilient network which will be maintained during severe weather events.

During periods of severe weather our dedicated winter services team is in constant contact with our Resilience team, communications team, winter services contractor and our internal operational teams to ensure current and upcoming conditions are monitored and acted upon in line with our winter services policy.

Information about hazardous conditions such as snow, ice, flooding and high winds is communicated via www.newcastle.gov.uk, [NewcastleCityCouncil](#) on Facebook and [@NewcastleCC](#) on Twitter to ensure the public are aware of severe conditions that may affect the road network.

As part of this strategy communication with neighbouring authorities will be maintained during periods of severe weather, when a severe weather desk could be raised to ensure continuity of action is taken across boundaries.

Resilient Network Review

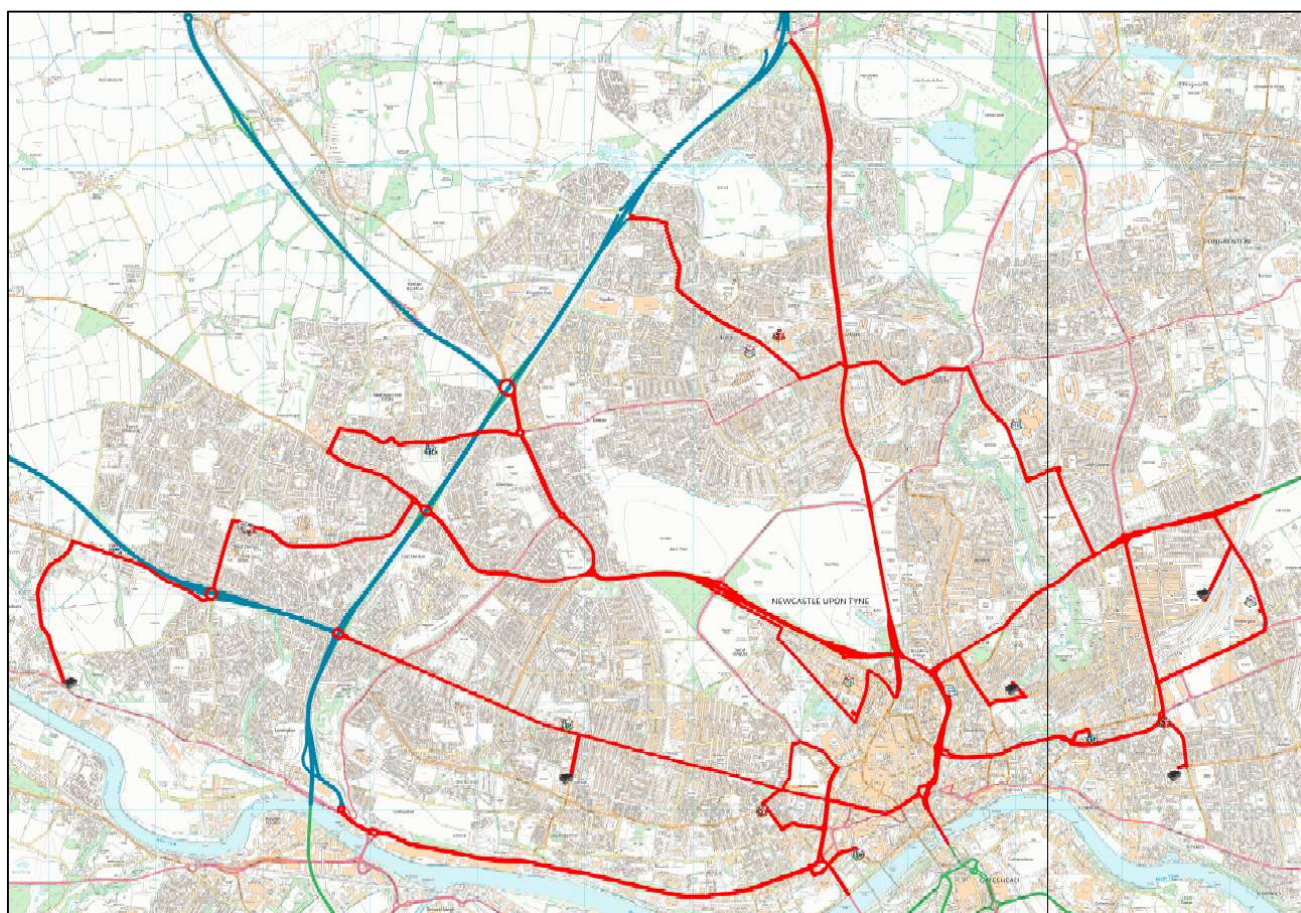
The resilient network and resilient network strategy will be reviewed in September each year to ensure that the resilient network remains relevant and up to date in advance of the winter period.

The annual review will consider any changes in circumstances which may affect the efficiency of the resilient network strategy.

Changes in circumstances that may affect this strategy could be changes in road use, construction of new roads, increased/decreased traffic flows, street closures, a new key service being identified or anything which could pose a risk to the highway network or access to one of the key services previously identified.

Lessons learnt reviews will also take place following any major event to ensure that the effectiveness of the resilient network is continually monitored and allow for any adjustments to be made which could improve the resilience of Newcastle City. Feedback from our internal teams as well as emergency services will be reviewed as part of the lessons learnt process.

Resilient Network plan



Roads shown in **RED** are local authority Roads which form part of our resilient network.

Roads shown in **BLUE** are National highways roads within the boundary of Newcastle City.

END OF REPORT