



Doncaster

Resilient Network Plan

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1. Introduction

1.1. Background

The Transport Resilience Review was commissioned by the Department for Transport in 2014 following the severe weather of winter 2013/14 was “a review of the resilience of the transport network to extreme weather events”. The review was published in July 2014 with 63 recommendations made overall and 14 of them targeted at Local Authorities with Recommendation 35 stating Local Authorities to “identify a ‘resilient network’ to which they will give priority, in order to maintain economic activity and access to key services during extreme weather”. [Transport Resilience Review \(2014\)](#)

The Review also recognises that an economically rational approach should be taken in regards to spending on resilience, “ensuring that enough is invested, with the right prioritisation, and avoiding wasteful and economically unjustified expenditure”.

The Well-Managed Highway Infrastructure: A Code of Practice document highlights the significance of a network hierarchy as a foundation of a risk-based maintenance strategy. It reiterated the need for and importance of a resilient network, which gave further parameters and scope as to how a resilient network should be developed.

Recommendation 20 of the Code of Practice states “*Resilient Network within the highway network hierarchy 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.*”

1.2. Importance of the Highway Network

The Doncaster road network is a vital asset within the Borough and is one of the most widely used pieces of infrastructure in Doncaster. The Department for Transport estimated that 2.13 billion vehicle miles were travelled on Doncaster roads in 2018; increasing from 1.4 billion in 1993, the year data was first collected. The Doncaster network is used for a wide range of needs and services including personal use, commuting, transportation of goods and emergency services access. The continued usability of Doncaster’s highways, footways and continued access to key assets, infrastructure and critical sites all form the basis of and the need for a resilient network.

Resilience in this context can be defined as the ability of the transport network to cope and manage the impacts of extreme weather incidents, operate within a weather incident such as floods or heavy snow and be able to recover as quickly as possible and return to normality.

1.3. Winter Maintenance Network

Doncaster Council already has a Winter Maintenance Network, which is a defined and designated portion of the network in which precautionary salting is carried out, when needed. The Doncaster Resilient road Network is not as extensive or wide-reaching as the Winter Maintenance Network however, a large portion of the Resilient Network will also fall into routes designated as part of the Winter Maintenance Network.

2. Aims and Objectives

2.1. Aims

Identify the most critical routes on the highway network which cannot be done without for a time and ensure they are maintained in order for continued access during times of extreme weather or major incidents.

2.2. Objectives

The objectives of the Doncaster Resilient Road Network are to maintain the following:

- connectivity between major communities;
- links to the strategic highway network;
- connectivity across authority boundaries where appropriate;
- links to transport interchanges;
- access to emergency services facilities and hospitals
- links to critical infrastructure
- principal public transport routes, access to rail and bus stations/garages/depots
- other locally important facilities.

This Doncaster Resilient Network identifies the most critical routes and associated assets in Doncaster and will lead to planned maintenance being prioritised on these routes, as well as additional maintenance and interventions. This will improve the resiliency of the network and reduce the risk of failure during extreme weather events, major incidents or unplanned events.

3. Methodology

3.1. Proposed Resilient Road Network

Doncaster Council is currently responsible for approximately 1,800km of highway and borders with seven neighbouring Local Authorities; all with highway networks joining onto and continuing into the Doncaster Borough. The Resilient Road Network at this time covers approximately 170km or 105miles.

The methodology of identifying the Doncaster Resilient Road Network was through understanding and acknowledging what the minimum amount of network Doncaster Council can operate with whilst meeting the objectives mentioned in section 2.2 of this document.

It is impractical and unaffordable to provide continuous and full scale resilience and risk mitigation to all of the Doncaster Borough network. This is due to the numerous ways the road system is used, which increases the number of risks it opens itself up to, the increasing pressures on Local Authority budgets and the fact that some sections of the network maybe be sparsely used require highest priority road to be included in the Resilient Network.

3.2. Resilient Road Network Components

The Doncaster Resilient Network currently is comprised of two key existing networks and then supplemented by additional singular routes. The two networks are Diversion Routes for Unplanned Events on the Motorway (DRUEs) and the Primary Route

Network (PRN). This has been determined as the most appropriate and manageable network which meets the criteria of a Resilient Network.

This Resilient Network is formed of the minimum road network Doncaster could not do without for a time and would allow for continued economic activity and connectivity. Road users would still be able to access the Strategic Network and adjacent local authorities as well as move through the Borough. This proposed network will also allow for access to major ports, transport hubs, the town centre and local communities.

DRUEs are a critical component of the Doncaster Resilient Network as they maintain continued movement of traffic through and across the Borough when there is major disruption on the Strategic Network. These identified routes are key for commuters, commercial and economic activity and for maintaining connectivity.

The PRN is defined as designating roads between places of traffic importance across the UK. The aim is to provide easily identifiable routes to access the whole country. This is the other major component to the Doncaster Resilient Network as it is key to the continued accessibility across the Borough and is vital to meeting the resilient network aims of connectivity and accessibility.

The additional roads mentioned above account which are neither a DRUE nor PRN account for approximately (16km) 9% of the Resilient Network. They are critical in providing continued access to transport hubs, ports, adjacent local authorities and communities within Doncaster

3.2. Benefits of the Resilient Network

The routes identified as part of the Resilient Network are vital for continuous economic activity, access to key services in extreme weather emergencies and access during other major incidents impacting the network. As the Resilient Network is the amalgamation of the most critical routes and highway assets within the Borough, highlighting and maintaining them will reduce their vulnerabilities, reduce their susceptibility to risk and improve the resiliency of the network as a whole.

The Metropolitan Borough of Doncaster is the largest Metropolitan Borough in England as well as having a population of 302,400 according to the 2011 census, which is larger than several English cities. The population of Doncaster is spread between some urban built up areas and numerous rural villages that are susceptible to their access being cut-off in times of severe weather. A resilient network would work to mitigate any severe impacts on the network that could affect access to these communities.

3.3. Implementation

Doncaster Council will implement the Resilient Network by using it to form a significant basis for existing plans such as the Council's Highway Asset Management plan, the Winter Service Plan as well as other plans which affect the highway network. The Resilient Network will affect and influence decision making for maintenance, works and major events which impact the Doncaster highway network.

4. Monitoring and Review

4.1. Monitoring

The road network within the Doncaster Borough and its adjacent Local Authorities are constantly changing as is the environment, usage on the road and the impacts felt on the road system. Information pertinent to the Resilient Network will be collected at regular intervals, allow progress to be tracked suitability of the implemented system to be tracked and understood.

4.2. Review

To ensure the Resilient Road Network is kept up to date and remain suitable for the task it has been created for, a review will be undertaken after whichever of the following criteria arise first:

- It has been two years since the last review
- A major weather incident has caused significant impact on the network
- A major non-weather emergency incident has caused significant impact on the network
- Any other event where there have been lessons learnt.

The review process will evaluate:

- How resilient has this Resilient Network been during a period of severe weather or major disruption
- If the listed streets and accompanying map are still accurate
- If the resilient network of adjacent authorities has impacted the Doncaster Resilient Network
- If different routes are experiencing a major rise or fall in traffic flow.

5. Consultation

5.1. Internal and External Consultation

The initial consultation of the Doncaster Resilient Network was held internally between 7th July – 23rd July 2021 and then externally from 3rd August – 3rd September 2021. The proposed Resilient Network was given to key partners for suggestions and recommendations which were then considered.

Below are the list of internal and external partners who were consulted with:

5.2. Internal Partners

- Highway Network Management
- Drainage and Streetworks
- Highway Infrastructure
- Highway Operations
- Safer Roads =
- Resilience and Emergency Planning
- Business Doncaster



5.3. External Partners

- South Yorkshire Police
- South Yorkshire Fire & Rescue
- Yorkshire Ambulance Service
- South Yorkshire Passenger Travel Executive
- Highways England
- Drainage Boards operating in Doncaster
- Airport and iPort
- Network Rail
- Northern Power Grid
- Environment Agency (Yorkshire)
- Yorkshire Water

5.4. Adjacent Local Authorities

- Barnsley Metropolitan Borough Council
- Rotherham Metropolitan Borough Council
- Nottinghamshire County Council
- North Yorkshire County Council
- Wakefield Metropolitan District Council
- East Riding of Yorkshire Council
- North Lincs Council



Appendix: Doncaster Resilient Network Map

