

DEVELOPMENT OF A RESILIENT NETWORK FOR STAFFORDSHIRE COUNTY COUNCIL

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1 INTRODUCTION

The Transport Resilience Review recommended 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”. The use of a resilient network is advocated in the incentivised funding self-assessment questionnaire.

This report details how the resilient network in Staffordshire was developed and provides a summary of the proposed network. Unless otherwise stated, the term network in this report is the Resilient Network.

2 PROCESS

A draft network had been produced in 2017 based on the Primary Route Network. The Primary Route Network was appropriate as a basis for the network as it connected most of the locations in this study.

The Strategic Road Network (SRN), operated by Highways England, augments the Council's network. It is assumed that the SRN is more resilient than the local network because these roads are major strategic routes.

All links in the network have been referenced to the local street gazetteer using unique street reference numbers and elementary street unit IDs.

3 CONSULTATION

Both internal and external consultation has been made in the development of this network. For internal consultation, representatives have been consulted from Network Management, 'Make it Stoke on Trent & Staffordshire' Inward Investment Service and Economic Regeneration.

For external consultation, a number of organisations were contacted via the Civil Contingencies Unit to identify each organisation's key assets.

4 CRITERIA

The criteria used to identify the network are listed below and grouped according to the two themes.

Maintaining Economic Activity, by providing links to:

- Main town centres: Burton-upon-Trent, Cannock, Lichfield, Leek, Newcastle-under-Lyme, Rugeley, Stafford, Stone, Tamworth, Uttoxeter
- Strategic Economic Sites
- Main railway stations - those serving in excess of 1 million passengers per annum.
- Bus depots

Access to key services during extreme weather, including

- Highway authority depots
- Ambulance stations
- Fire station – whole time only
- Main police stations
- Accident and Emergency care locations

5 OTHER CONSIDERATIONS

Traffic levels do not form any specific criteria to distinguish the roads on the network. However, data on traffic levels was used to indicate demand on the network. Links on the Primary Route Network with low demand, and with an appropriate alternative route available, were considered for exclusion from the network.

Consistency with neighbouring highway authorities is a recommendation of the current Code of Practice. This means that neighbouring networks should connect with the Staffordshire network. To achieve this, a set of border locations from the Midland Service Improvement Group has been used and direct contact with those authorities that connect with the proposed network has been made, details are provided in Annex A.

Highways England operates emergency diversion routes (EDRs) from the SRN. At this time, these routes have not been accommodated within the network. However, Highways England could utilise the County’s network as part of its planning for future EDRs.

Through external consultation via the Civil Contingencies Unit, 55 locations were identified; these locations included 22 business parks, 9 emergency services sites, 5 prisons, 4 chemical plants, 4 utility sites, 3 hospitals, 2 defence sites. Of the 55 locations, 43 sites were close to the proposed network. None of the 12 sites that were not close to the proposed network were assessed to be sufficiently significant to warrant a connection being established.

Some locations were deemed to require additional resilience but were not significant enough for inclusion on the resilient network. An example is crematoria. At these locations, additional resilience will be considered as part of maintenance planning.

6 SUMMARY OF THE PROPOSED NETWORK

Table 1 provides a summary of the length of the proposed network by road class.

Table 1: Lengths of the proposed network*

Road class	Network Length (km)	Overall Length (km)	Percentage of Road class
A	451.1	725.6	62.2%
B	3.5	339.6	1%
C	2.0	1370.0	-
U	2.5	3466.0	-
Total	459.1	5900.8	7.8%

* Lengths have been calculated from the local street gazetteer data

Almost all of the network is on Principal ‘A’ roads.

ANNEX A: CONSISTENCY WITH OTHER AUTHORITIES

In developing this resilient, the following authorities have been contacted:

- Cheshire East Council
- Derbyshire County Council
- Shropshire Council
- Walsall Council
- Wolverhampton City Council
- Worcestershire County Council

Cheshire East Council

Luke Phillips was contacted at Cheshire East. They provided a map of their current network. This map confirmed that the A51 south of Nantwich is on their Resilient Network. The A525 is not on the Resilient Network.

Cheshire East have also included the A527 south east of Congleton. The reason for this inclusion was Congleton War Memorial Hospital; moreover, this hospital was only included as all other hospitals in the authority area had been included, it is not an A&E site and therefore it is proposed not to adopt this link in Staffordshire.

Derbyshire County Council

Dean Finlay was contacted at Derbyshire County Council. They provided a map of their Resilient Network. This map confirmed that the A511 east of Burton-upon-Trent is on their network.

The A444 is not on their current network. It was originally added, but later replaced with the A511 route to connect to Leicestershire's network.

The A511 south from the A50 is not on the Derbyshire network.

Leicestershire County Council

Mark Evans was contacted at Leicestershire County Council. The A511 was confirmed on their network which connects through Derbyshire. The resilient network on the A444 stops at the A42 and does not go to the County Boundary. The A444 from Stapenhill to the county boundary has been excluded as a result.

Shropshire Council

The consultant maintains the network on behalf of Shropshire Council.

Neither the A51 or the A525 are currently on this network. The A51 will be considered on the next review.

The A5 west of Gailey is on the network and was added to connect with Telford and Wrekin's network.

The A41 south of the M54 is on the network as is the A458 east of Bridgnorth.

The A454 is not on the network as it is not a key freight route and the route could be achieved using either the A458 to the south or M54/A41 to the North.

Walsall Council

Kathryn Moreton was contacted at Walsall Council. They are currently reviewing their network and have offered to meet with Staffordshire in early 2020.

Wolverhampton City Council

Paul Walton was contacted at Wolverhampton City Council. They have winter service routes and key routes. They provided feedback on a small number of possible connections.

They have confirmed that the A454 Bridgnorth Road, A41 Wergs Road and A460 Cannock Road is on both the winter service and key route networks.

Worcestershire

Worcestershire provided data on links that touch the borders of the County. Their network is actually the winter service network and as such is much more extensive than Staffordshire's network. This data confirmed that the A449 south towards Kidderminster is on the network.

The consultant wishes to thank all of the officers contacted for their prompt assistance.

ANNEX B: Changes from Primary Route Network

The following changes from the 2017 draft network based on the Primary Route network are listed. The length of the section is given (Len) and the impact on the winter service network (Salt+) where additional salting may be required; all measures are in kilometres.

Action	Location	Change comments	Len	Salt+
Newcastle-under-Lyme				
×	A51 north from A53	O-D is M6 J15 to Nantwich, also served by A500 & M6 Included as Cheshire East has this route and it also supports the M6	(3.258)	0.000
×	A525 west of Newcastle	O-D is Newcastle to Whitchurch, also served by A53 & A41 Included up to Science Park as Cheshire East do not include this route	(11.673)	0.000
Staffordshire Moorlands				
•	A52 from A523 to A520	Route is not heavily trafficked, Ashbourne to Stoke could be achieved via Leek instead. Route has been maintained in the network for access to Hemmingslow Depot	0.000	0.000
+	Hemmingslow Lane	Access to Hemmingslow Depot	0.911	0.000
Burton-upon-Trent				
×	A511 from Burton to County Boundary towards A50	Route is not heavily trafficked, O-D can be served by A38, Diversion 17km from 10km Derbyshire do not have route from the County Boundary to the A50.	(5.567)	0.000
+		Access to Queens Hospital	0.953	0.000
×	A444 from Burton to County Boundary	Route does not link to neighbouring authorities resilient networks and A511 is available as an alternative	(1.741)	0.000

Lichfield				
×	A513 from A38 to A515	Route is not heavily trafficked. Diversion 32km from 22km. Traffic is currently discouraged from using this route.	(5.871)	0.000
×	A515 from Lichfield to County Boundary towards A500	Route is not heavily trafficked, O-D could be served by A38. Traffic is currently discouraged from using this route.	(22.647)	0.000
+	Swan Road (part) and Queen Street (part)	Access to Lichfield Police station	0.283	0.283
Rugeley				
+	A51 Rugeley Bypass	Access to Power Station and Tower Business Park	6.040	0.000
×	A460 Main Road, Brereton between the Globe Island and Rugeley Bypass south	Remove as now served by Rugeley Bypass	(4.289)	0.000
Cannock				
+	Lichfield Road, Mill Street and Bancrofts from A4601	Link to Cannock Police station	1.211	0.131
Gailey				
+	A5 west from Gailey to County Boundary	Forms part of possible HE EDR, Route on Telford & Wrekin and Shropshire's Resilient Network	12.251	0.000
Stafford				
+	Tollgate Drive	Access to Ambulance Station	0.627	0.130
+	Hydrant Lane	Access to Stafford Fire Station	0.163	0.163
Stone				
+	Newcastle Street	Access to Stone depot	0.375	0.000
Uttoxeter				
+	B5030 north from A50	Access to JCB site	5.143	0.000
Total			(3.765)	0.707