# North Yorkshire Resilient Highway Network

**Policy Background**

The North Yorkshire Resilient Highway Network is based upon the Critical Highway Infrastructure network and the York and North Yorkshire Key Route Network (KRN). These have been developed and approved within the past ten years.

The Resilient Network in North Yorkshire was formally approved at the Council's Executive member meeting 11 November 2016. This report can be accessed here

The Key Route Network for York and North Yorkshire was developed jointly between NYC, City of York Council and York and North Yorkshire Combined Authority in 2024 before being formally adopted in January 2025.

**What are the principles behind our network**

It is essential that the Council properly plans its response to emergency situations. These can be, for example, extreme weather events or major incidents involving the emergency services. At such times keeping the highway network available for use can be particularly challenging and it is important to be able to recognise those roads and bridges which are critical. In this context they are the roads and bridges for which plans are in place to be able to keep them open or, if closure is unavoidable, measures to deal with the situation have been identified.

The network has been defined as the network which provides access to and connection between the main population centres, which also serve as the locations where shops, businesses and other services are concentrated. The network also takes account of the primary operational bases used by the emergency responders and the location of national infrastructure assets.

Our Resilient network provides

- Connectivity between major communities
- Links to the strategic highway network
- Connectivity across authority boundaries where appropriate
- Links to transport interchanges
- Access to emergency facilities including Fire & Rescue, Police, Ambulance Services and hospitals
- Links to critical infrastructure (ports, power stations, water treatment works etc)
- Principal transport routes, access to rail and bus stations and to bus garages and other depots
- Access to other locally important facilities

Strategic risks have been identified which has included highlighting the main bridges which can become a focus for attention during flood events. The total length of the 'critical' routes is 1040km. These routes link the main population centres which have a combined population of 64% of North Yorkshire's residents. In addition, further communities lie alongside or near to these routes which means that, overall, the critical network supports the movement of a very high proportion of the community.

All routes in the resilient network are part of our Priority 1 winter maintenance network.

**The Key Route Network**

The Key Road Network (KRN) encompasses routes in North Yorkshire and City of York that are deemed as being locally important and provide strategic connections across a Mayoral Combined Authority Area (MCAA). Responsibility for selecting roads for the KRN effectively sits with each individual Mayoral Combined Authority (MCA) through agreement with the constituent local highway authorities NYC and CYC.

The KRN does not include routes that form part of the Strategic Road Network (SRN) that are managed and maintained by National Highways within the YNYCA area this includes A1(M), M62, A64, A66(T), A168(T) and the A19(T).

Whilst there is overlap between the KRN, the resilient network is in place to support response to incidents and emergencies. Alongside the resilient highway network, the routes on the KRN are the main strategic routes within North Yorkshire provide key economic links across the County and to adjacent areas.

**The resilient highway network provides links to the following settlements and associated emergency service locations**

| | North Yorkshire Fire & Rescue | North Yorkshire Police | Yorkshire Ambulance Service |
|---|---|---|---|
| Catterick Garrison | Y | Y | N |
| Hawes | Y | Y | Y (at Bainbridge) |
| Leyburn | Y | Y | N |
| Reeth (Swaledale) | Y | Y | N |
| Richmond | Y | Y | Y |
| Bedale | Y | Y | N |
| Easingwold | Y | N | N |
| Great Ayton | N | Y | N |
| Northallerton | Y | Y | Y |
| Stokesley | Y | Y | N |
| Thirsk | Y | Y | Y |
| Filey | Y | Y | Y |
| Scarborough | Y | Y | Y |
| Whitby | Y | Y | Y |
| Helmsley | Y | Y | N |
| Kirbymoorside | Y | Y | Y |
| Malton | Y | Y | Y |
| Norton-on-Derwent | N | N | N |
| Pickering | Y | Y | N |
| Bentham | Y | N | N |
| Cross Hills | N | N | N |
| Grassington | Y | Y | Y |
| Ingleton | N | Y | Y |
| Settle | Y | Y | Y |
| Skipton | Y | Y | Y |
| Boroughbridge | Y | Y | N |
| Harrogate | Y | Y | Y |
| Knaresborough | Y | Y | N |
| Masham | Y | Y | N |
| Pateley Bridge | Y (at Summerbridge) | Y | Y |
| Ripon | Y | Y | Y |
| Selby | Y | Y | Y |
| Sherburn in Elmet | Y | Y | Y |
| Tadcaster | Y | Y | N |

It should be noted that there are additional emergency service locations in other communities.

North Yorkshire Fire & Rescue – Danby, Goathland, Lofthouse, Lythe (on A174), Robin Hoods Bay and Snainton (on A170)

North Yorkshire Police – Eggborough & Barlby (both on A19) and Hampsthwaite

**Other National Infrastructure Assets on the Resilient Highway Network**

Friarage Hospital, Northallerton

Scarborough General Hospital

Whitby Community Hospital

Malton Community Hospital

Harrogate District Hospital

Selby War Memorial Hospital

Drax Power Station

**Roads included as part of the Resilient Highway Network**

The following roads form the North Yorkshire Resilient Highway Network

| Road | Location |
|---|---|
| A1039 | A64 to Filey |
| A1041 | Selby to East Riding Boundary at Snaith |
| A1238 | Selby Town Centre to A63 |
| A1246 | Brotherton to A63 |
| A162 | Brotherton to A64 Tadcaster |
| A163 | A19 to Bubwith |
| A165 | Scarborough to East Riding Boundary |
| A167 | Darlington Boundary to A168 (T) Topcliffe |
| A169 | Malton (A64) to Whitby |
| A170 | Scarborough to Thirsk |
| A171 | Scarborough to Tees Valley Boundary |
| A172 | A19 to Tees Valley Boundary |
| A173 | A172 to Boundary with Redcar & Cleveland |
| A174 | Whitby to Boundary with Redcar & Cleveland |
| A19 | City of York Boundary to to Boundary with Doncaster |
| A19 | City of York Boundary to Thirsk |
| A56 | A59 to Lancashire Boundary |
| A59 | A59 Skipton to Lancashire Boundary |
| A59 | City of York Boundary to Skipton |
| A6040 | A6040 York Place Harrogate |
| A6055 | Scotch Corner to A1(M) Junction 50 |
| A6068 | Crosshills to Lancashire |
| A61 | Thirsk to Harewood including Harrogate town centre |
| A6108 | Scotch Corner to Ripon |
| A6131 | Skipton Town Centre to A629 |

| | |
|---|---|
| A6136 | A1(M) to Catterick Garrison |
| A629 | A629 Skipton to Bradford Boundary |
| A63 | A1(M) to East Riding Boundary |
| A64 | A64 (T) to Scarborough Town Centre |
| A645 | A1041 to East Riding Boundary (M62) |
| A645 | Boundary with Wakefield MBC to Boundary with East Riding of Yorkshire |
| A65 | A65 Bradford Boundary to Lancashire Boundary |
| A658 | Harrogate Bypass to Pool |
| A659 | A64 to Boundary with Leeds CC |
| A661 | Harrogate to Boundary With Leeds CC |
| A684 | A19 to Cumbria Boundary |
| A687 | Ingleton to Lancashire Boundary |
| B1248 | A64 Brambling Fields to East Riding Boundary |
| B1248 | York Road/Yorkersgate/Castlegate, Malton |
| B1257 | Helmelsey Road Stokesley |
| B1257 | Old Maltongate/Old Malton Road, Malton |
| B1365 | Thirsk Road & High Street Stokesley |
| B6165 | Pateley Bridge to Ripley |
| B6265 | Skipton to Ripon |
| B6265 | Leeming Lane to A168 Boroughbridge |
| B6270 | A6108 to Reeth |
| B6480 | A65 Settle Roudnabout to A65 Junciton (through Settle & Giggleswick) |
| C321 | Low Street/Milford Road, Sherburn-in-Elmet |
| C34 | Range Road & Leyburn Road Catterick Garrison |
| C421 | Thirsk Road, Long Street & York Road Easingwold |
| U12<br>U10 | Bagdale/New Quay Street/Bridge Street/Church Street, Whitby |

**Major Structures on the Resilient Highway Network**

| NYC Highways Area | Road | Structure | Watercourse |
|---|---|---|---|
| 1 | B6270 | Grinton Great Bridge | Swale |
| 1 | B6270 | Reeth Bridge | Swale |
| 1 | A6108 | Lownethwaite Bridge | Swale |
| 1 | A6108 | Mercury Bridge | Swale |
| 1 | A6108 | Catterick Great Bridge | Swale |
| 1 | A6108 | Skeeby Bridge | Gilling Beck |
| 1 | A684 | Moss Bridge | Ure |
| 1 | A684 | Holmehead Bridge | Ure |
| 1 | A684 | Appersett New Bridge | Ure |
| 1 | A684 | Hawes Bridge | Gayle Beck |
| 1 | A684 | Bainbridge Bridge | Bain |
| 1 | A684 | Hestholme Bridge | Bishopton Beck |
| 1 | A684 | Wensley Great Bridge | Ure |
| 1 | A6108 | Middleham Bridge | Ure |
| 1 | A167 | Croft Bridge | Tees |
| 2 | A173 | Great Ayton Bridge | Leven |

| | | | |
|---|---|---|---|
| 2 | B1365 | Stokesley Bridge | Leven |
| 2 | A172 | Rook Wood Bridge | Leven |
| 2 | A684 | Morton-on-Swale Bridge | Swale |
| 2 | A61 | Skipton-on-Swale Bridge | Swale |
| 2 | A167 | Topcliffe Bridge | Swale |
| 2 | A170 | Sutton Beck Bridge | Sutton Beck |
| 3 | A170 | Ayton New Bridge | Derwent |
| 3 | A170 | East Ayton Bridge | Derwent |
| 3 | C10 | Whitby Swing Bridge | Esk |
| 3 | A171 | Whitby High-level Bridge | Esk |
| 4 | B1248 | County (Malton) Bridge | Derwent |
| 4 | A170 | Helmesley Bridge | Rye |
| 4 | A170 | Welburn Bridge | Hodge Beck |
| 4 | A170 | Dove Bridge | Dove |
| 5 | B6265 | Grassington Bridge | Wharfe |
| 5 | A59 | Bolton Wharfe Bridge | Wharfe |
| 5 | A629 | Kildwick Bridge | Aire |
| 5 | A59 | Inghey River Bridge | Aire |
| 5 | A65 | Coniston Bridge | Aire |
| 5 | A65 | Greta Bridge | Greta |
| 5 | B6480 | Ribble Bridge (Settle) | Ribble |
| 5 | A65 | Runley Bridge | Ribble |
| 6 | A6108 | Masham Bridge | Ure |
| 6 | A6108 | North Bridge (Ripon) | Ure |
| 6 | A61 | Duchess of Kent Bridge | Ure |
| 6 | B6265 | Boroughbridge Bridge | Ure |
| 6 | A168 | Arrows Bridge | Ure |
| 6 | B6265 | Pateley Bridge | Nidd |
| 6 | A61 | Killinghall New Bridge | Nidd |
| 6 | A59 | Knaresborough High Bridge | Nidd |
| 6 | A658 | Rampart Bridge (on Knaresborough bypass) | Nidd |
| 7 | A659 | Tadcaster Bridge | Wharfe |
| 7 | A19 | Selby Toll Bridge | Ouse |
| 7 | A63 | Selby Swing Bridge | Ouse |
| 7 | A19 | Chapel Haddlesey Bridge | Aire |
| 7 | A1041 | Carlton Bridge | Aire |

Note: Wharfe bridges on A658 and A61 at boundary managed by Leeds City Council and Derwent bridges on A163, A63 and A645 at boundary managed by East Riding Yorkshire Council.

**Key Risk Locations**

These are the key risk locations on the resilient highway network, along with mitigations in place

| Area | Location | Risk | Mitigation in place |
|---|---|---|---|
| 1 | A684 Wensleydale | Flooding | Diversion routes established |
| 1 | A6108/B6270 Swaledale | Landslips | Geotechnical monitoring regime in place |
| 2 | A684 Morton-on-Swale | Flooding | Diversion route established |
| 2 | A170 Sutton Bank | Vehicles stuck on bank | Diversion route established |
| 3 | A169 Fylingdales | Risk of heavy snow | Targeted gritting response / diversion route |
| 4 | B1248/B1257 Malton/Norton | Flooding | Diversion route/NYLRF pumping plan |
| 6 | A59 Kex Gill | Landslips | Geotechnical monitoring regime / diversion route<br>Formal diversion route under construction - due for completion 2026 |
| 7 | A659 Tadcaster | Flooding | Diversion route established |
| 7 | A19 Selby | Flooding | Diversion route established |