



Department for  
Digital, Culture,  
Media & Sport

# **Trans Pennine Initiative Trial: Call For Information Update and Notification of Discontinuation of Radio Infrastructure Delivery**

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Department for Digital, Culture, Media & Sport**

## Introduction

The Trans Pennine Initiative (TPI) is a joint project between the BDUK Local Full Fibre Networks (LFFN) and 5G Testbeds and Trials (5GTT) Programme, to investigate the potential of using the rail network to enhance connectivity for rail passengers and the population more generally.

The benefits of improving connectivity for passengers could be considerable. It could not only make journeys more enjoyable and productive for the passenger, but could help improve the operation and safety of the railway and deliver economic benefits for the whole of the UK. Rail remains a key part of the Government's commitment to improving coverage where people live, work and travel. Alongside the TPI, we are considering the next steps in this strategy and will share further details later in the year.

There are three main components of the TPI:

- I. An LFFN-focused element, deploying high capacity fibre along the Trans Pennine route from Manchester to York, to provide backhaul capacity for open access points along the route, and test a commercial model for fibre deployment on the railways. It also provides a high capacity inter-connection between the Manchester and Leeds Internet Exchanges, thereby strengthening critical internet infrastructure within the Northern Powerhouse.
- II. An upgrade to the existing Network Rail test track (the Rail Innovation and Development Centre, RIDC) at Melton Mowbray, to enable it to trial new technologies including 5G.
- III. Passive infrastructure including masts along the Trans Pennine route, to enable radio trials of high quality passenger connectivity on trains.

Network Rail are the delivery partner for all three components.

To support the TPI, a [Call for Information \(CFI\)](#) was undertaken over the summer to understand market appetite for participating in the passenger connectivity trials. Further details of the project structure can be found in the CFI document, released in the summer of 2018.<sup>1</sup>

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<sup>1</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/737878/TPI\\_Trial\\_CFI\\_V2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/737878/TPI_Trial_CFI_V2.pdf)

## **Fibre connectivity on Trans Pennine Route**

The Government is committed to improving mobile connectivity for rail passengers across the United Kingdom, including on the Trans Pennine Route.

Fibre cable deployment along the Manchester to York route has started, and is on track to complete in May 2019 as planned. Over 50% of the fibre is already laid (65km of 116km). Splicing has also started, and planning requests for connections to internet exchanges in Leeds and Manchester are nearly complete. This element of the TPI project will allow Network Rail to:

- Demonstrate the viability of using the rail corridor to deploy cost effective, high capacity fibre,
- Increase the availability of and access to full fibre connectivity to communities and enterprises, and;
- Establish potential commercial models that could be used as a blueprint to deploy high capacity fibre infrastructure across other parts of the rail network.

Fibre being laid enables options for future infrastructure to be implemented on the route. These include:

- A backbone for digitisation of future operational and passenger services
- Enhanced connectivity to the trains and stations

Access points have been installed along the route for customers to access the fibre infrastructure that TPI is deploying.

## **Trialling 5G technologies at the Rail Innovation and Development Centre**

TPI will upgrade Network Rail's test track facility, the Rail Innovation and Development Centre (RIDC) at Melton Mowbray to enable future rail connectivity trials, with opportunities for equipment to receive rail approval.

As part of the CFI, there was general agreement that RIDC could be used to deliver relevant product approval to enable radio equipment to be operational within the rail corridor and that it will be an asset for future 5G technology testing on the railway corridor.

## **Passive infrastructure including masts along the Trans Pennine route**

The CFI sought feedback on, and interest in, testing passive infrastructure, including masts, along the Trans Pennine route, to enable radio trials of high quality passenger connectivity on trains.

Although there was interest in the concept of the trial, the market was not prepared to participate on the basis of the available funding (covering equipment provision only) and that following the trial a supplier could be required to remove their equipment.

In parallel, it has become clear, following the completion of a detailed site survey and planning work by Network Rail along the route, that the construction costs and complexity of the radio infrastructure required along the Trans Pennine route are significantly greater than expected. The timetable for delivery of the radio trial would also be significantly impacted by these factors. Having assessed alternative options, DCMS has concluded that there are no credible means to deliver the planned passenger trials to a suitable standard within the available budget and within a reasonable timeframe to inform wider policy development.

As a result of these factors and the results of the CFI, DCMS has taken the decision not to pursue the planned build of radio infrastructure along the Trans Pennine route.