2015 launch date for tram train experiment

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Long running plans to introduce tram trains to Britain have moved forward with the announcement that a two year Sheffield-Rotherham trial service will launch in 2015.

Supertram: new tram train vehicles will be able to run on existing system and railway lines

Transport minister Norman Baker this week gave the green light to a £58m scheme to run tram trams - trams that have been enhanced to be suitable for operation on lines used by trains as well as street running. He said the vehicles are ideal for the eight mile, non-stop journeys of no more than 25 minutes between suburb and city centres from Sheffield to Rotherham.

The new tram train vehicles will operate from 2015 on Sheffield's Supertram network and on part of the national rail network, which will be adapted to allow seamless travel from one to the other. Works being undertaken to make the project a reality will include the electrification of a stretch of track between Sheffield and Rotherham and the construction of a 400 metre line linking the tramway to train tracks.

When the trial service launches there are expected to be three tram train services an hour all day and every day. These will operate from Parkgate Retail Park in Rotherham, through Rotherham Central railway station, joining up with the existing Supertram network at Meadowhall where the services will then continue onwards to Sheffield city centre.

The tram train pilot is a partnership between the Department for Transport and Network Rail, Northern Rail, South Yorkshire Passenger Transport Executive and Supertram operator Stagecoach which will run for two years with a view to permanent operation. Stagecoach Supertram is expected to run the new tram trains and ticketing will be fully integrated with Supertram trams.

SYPTE will lead on delivery of the pilot and will procure seven vehicles suitable for use as tram trains and to provide the additional Supertram line capacity agreed in 2011. The total project is estimated to cost £58m.

A procurement exercise led by Northern in 2009-10 identified Vossloh as the lead bidder for the supply of tram trains but because Northern's franchise ends before the two year experimental period, the contract for the vehicles will be let by SYPTE.

WHAT'S THE DIFFERENCE? TRAM TRAIN VERSUS TRAM

- Higher vehicle crashworthiness to allow for the higher average speed operations of it and other trains and to resist slow speed collisions with heavier trains
- Enhancements to signalling system to minimise the risk of a collision between trains and tram trains. This involves installing train protection and warning system (TPWS) at all signals, whereas TPWS is currently installed at junctions and sites with high levels of signal passed at danger (SPAD) incidents
- Road Traffic Act compliant head lights and direction indicators for on-street operation and to meet rail main line lighting requirements for visibility
- Additional main line signalling and communications equipment such as TPWS and the Global System for Mobile Communication - Railway (GSM-R)
- More seating than a tram for longer distance journeys
- Wheel profile suitable for both tramway and standard main line track

Source: DfT
Details accurate at May 2012

Norman Baker said: "This is great news for passengers in South Yorkshire and potentially it could benefit people across the country wherever tram and rail networks exist together. Tram trains have already proven hugely popular on the Continent. Now we will be able to test whether they can bridge the gap between tram and train networks in this country."

David Brown, SYPTE director general, added: "The project will provide important enhanced local connectivity and demonstrate the potential, both locally and nationally, of this new technology to deliver value for money services."

If the pilot is successful, it opens the way for tram trains to be introduced in other parts of the country. Cllr Andrew Fender, chair of the Transport for Greater Manchester Committee, said: "We'll be watching Sheffield's tram train pilot very closely as we have begun work to understand whether this technology could be deployed within Greater Manchester. Tram trains could combine the advantages of the better access to the city centre our Metrolink tram system provides with the reach of the rail system into neighbouring districts. It has the potential to both improve public transport for passengers while also making our local rail services more cost effective."

A scheme to allow trams to cross from the Sheffield Supertram network on to the existing railway near Rotherham was announced in September 2009 (TB 6213) after plans for tram trains on the Sheffield-Penistone line, announced in March 2008 (TB 4796), were abandoned.