



# Light Rail (UK)

H2, The Tram Fuel of the Future

TRITON  
Hydrogen  
Solving Impossible Problems

## A Pre-Feasibility Tram Report for York Starter Line

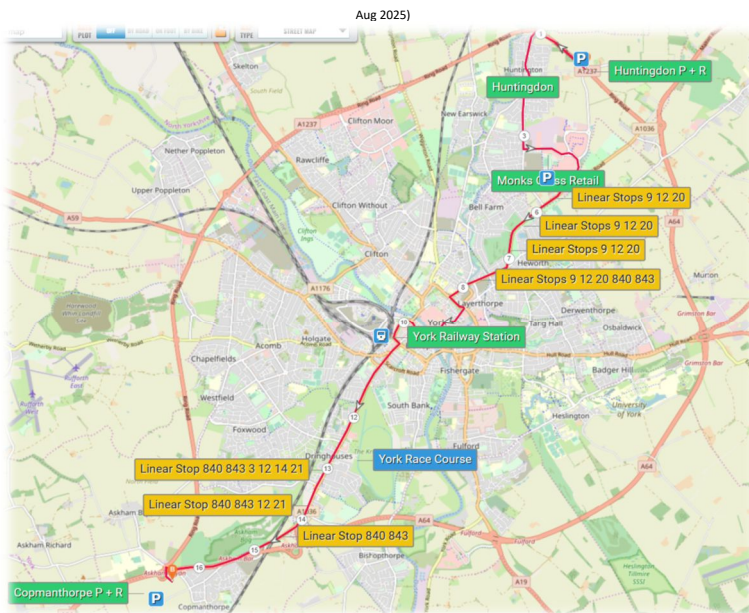
\*OHLE, (Over Head - Line Electric) or (OBP), On Board Power or Both available!



VLR MRC3 1 x Driver,  
X 200 passengers



Podcast @ <https://www.railindustryconnect.co.uk/rail-industry-connected-hydrogen-trams-as-a-service-with-jim-harkins-light-rail-uk/>



\*This starter line will pass through key stops like York Rail Station, Stonebow, and Woodthorpe, York Racecourse and out to a P+R on the South Western Ring Road. It will operate throughout the day at a proposed 6-minute peak headway, serving a mix of commuters, shoppers, and local residents

High frequency: every 6 minutes during peak times

Trams address the "Pollution Air Quality Task Group report A non-polluting distributor, steel-on-steel is clearly needed! Globally, PM pollution is linked to 9 million premature deaths annually. For example, in 2019, nearly 70% of the 4.2 million deaths attributed to ambient air pollution PM10s & PM2.5 were due to cardiovascular conditions.

A major contributor to Alzheimer's, Dementia and other issues

A Clean and Green Recycled transport gateway in the centre of York No Road/Tyre/Brake Particulates (NEE) (Trams are genuine zero-emission vehicles at the point of use!). A 2nd-generation working Tourist tram museum line a possibility? Tourist and City tramcars for all weathers

Addresses Transport Poverty and Social Exclusion by being disabled friendly and level boarding as standard

A Clean and Green Recycled transit system in the centre of York with No Road/Tyre/Brake Particulates (NEE) (Trams are genuine zero-emission vehicles at the point of use!).

Reduces the country to city centre buses, which then can offer a more frequent local feeder service in the outskirts of York to the tram

Single ticket operation is possible.

### No Air Pollution at Point of Use!



Self-powered new build tradition summer tram cars



City Cars (3) autonomously coupled, 300 passengers







# Green Trams

Are an absolute game changer for all things hydrogen with 100% Angel-share captured and corrosion protected

<https://triton-hydrogen.com/>



## Why Green Trams? ©Y

### York Starter Line 1.



A Coventry VLR running x 56 Pax



\* Doha VLR in Service x 100 Pax  
\* Can be autonomously coupled x 3 cars x 400 pax

Trams have a proven record of getting people out of their cars whilst producing zero emissions and particulates at point of use and that these very light rail\* (VLR) offers significant potential for enabling these benefits to be realised on a significant larger scale.



Sheffield Super Tram x Stadler Citylink Class 399 x 236 Pax

VLR vehicles are now available to order in the UK

\* VLR trams are built to International

Light Rail Standards and are a low cost starter line.

Less than £10M per track Kilometre and are a significant Public Transport Legacy.

The national delivery of an integrated transport system will often involve initiatives that span local authority and county boundaries and mechanisms for coordination at regional levels are needed to help promote and deliver this project.



### Legal utilities are left in place

The new track is laid just 30cm within the road's surface, minimising the need to relocate pipes and cables which is time-consuming and expensive.

Compatible with current vehicles including VLR, Light Rail & TramTrain

This is achieved by taking advantage of cutting-edge materials, while still making use of standard rail parts



\*Precast Advanced Track  
Installation less than £10M per Km



\*Ingerop and its UK subsidiary Rendel.  
30 cm into the road surface Installation  
less than £10M per Km

### Planning impression

The largest share of transport emissions comes from cars, accounting for 38% a 20% reduction by 2030!...Transport Scotland Jan 2022

**As Trams have a high modal switch circa 25% - 32%, this demonstrator line can achieve that target along this corridor**

Statistics in Tram integrated Nottingham show that LEZs are not required

-Light Rail (UK)

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Reality of road space reallocation



Hydrogen/electric buses can only be seen as a welcome interim solution in the short term with no transport legacy, they still remain a source of significant particulate pollution (\*NEE) arising from the friction between tyres and road surfaces. Non-exhaust emissions make up over half of particulate pollution from road transport while steel wheels running on steel rails create zero emissions of this type.

**\*All UK Governments are aware of this (Greenwash) NEE pollution**



\*40,000 folk died from Particulates and Heavy metals

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Light Rail Consultants, Transport Engineers, Private Enterprise, Politicians, Academics, Environmentalists and others.

Commercial specialists in low-cost, VLR, affordable & sustainable tramways  
[www.lightrailuk.co.uk](http://www.lightrailuk.co.uk)

**"if you can't get to places, you can't do things, and the things you can't do are important!"**

Sponsored by Clean & Green Transport and Funded by Triton Hydrogen Ltd