

“TramTrain – Leeds’ Catch up Opportunities”

TramTrain Conference, 27th May 2016
All Party Parliamentary Light rail Group

A presentation by

Jim Harkins FCILT, MTPS.

Light Rail (UK)

Specialists in Affordable & Sustainable Tramways

www.lightrailuk.com

E-mail Lightrailuk@aol.com

Warrington Business Park, Long Lane, Warrington, UK

01925 243500





METRO

APPLRG: April 21st 2009

*Tram-Train – Grasping the
Opportunity*



“TramTrain – Leeds’ Catch up Opportunities”

Why TramTrain?

Can be cost effective use of underused/disused heavy rail assets

Reduction of the maintenance cost base, line of sight

Capacity relief at congested Heavy Rail stations by street running

Provision of frequent, reliable and inter-urban links

Seamless access to the heart of the urban area



Can be used as a “Starter Line” for a City network

“TramTrain – Leeds’ Catch up Opportunities”

Key Benefits of the Technology (1)

Almost new concept in the UK

Most of the technical problems have been solved

Operating costs can be lower

Can take advantage of environmental benefits

High Modal Switch, Increased retail footfalls 35%+

Carbon Credits (Eventually!)

“TramTrain – Leeds’ Catch up Opportunities”

Key Benefits of the Technology (2)

Free railway stations from congestion

Improves punctuality and reliability.

Removes the need for additional mode journeys


Seamless switching from railway track to urban tramline.

Passengers alight closer to the office, the shops or leisure.

TramTrains can accelerate more rapidly make frequent stops and keep end-to-end journey times attractive.

“TramTrain – Leeds’ Catch up Opportunities”

Main Types of TramTrain



TramTrain:	Inter vehicle running, track sharing	Kassel, Karlsruhe etc.,
TramTrain:	Track sharing, Seperated by timetable	Sunderland, Kassel
TramTrain:	Sole use of former heavy rail infrastructure	All of UK Light Rail Systems
TramTrain:	Mainline railway-type vehicles	Zwickau, Camden – Trenton “River Line”

All can give access to a town tram system using heavy rail infrastucture

“TramTrain – Leeds’ Catch up Opportunities”

What kind of track sharing is there?

Electric/Steam/Diesel/Freight/Timetable

Nordhausen Germany

Has it all!



Light Rail (UK) Ltd

“TramTrain – Leeds’ Catch up Opportunities”

Problems & Obstructions

Myths & Legends

Institutional

No political depth of vision

Lack of understanding

Perceived high costs



The Town or City

What do we need?

Connectivity & Movement

Centre of activity, trade, commerce,
agglomeration, retail, culture, leisure etc.,

Vibrancy, attractiveness

Where do we need it?

Roads & Streets

Roads & streets are arteries'

Movement is lifeblood – clogged, life ebbs,

It is happening here in Leeds as we speak



The Town or City

Without movement what do we get?

Decay

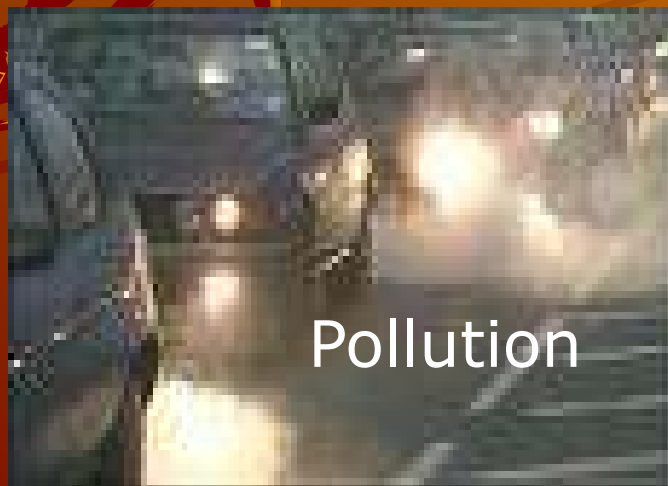
Regeneration and Reversal is slow, difficult & expensive

***Low cost alternatives have not
worked on the same scale***



“TramTrain – Leeds’ Catch up Opportunities”

Why do we need it now?



“TramTrain – Leeds’ Catch up Opportunities”

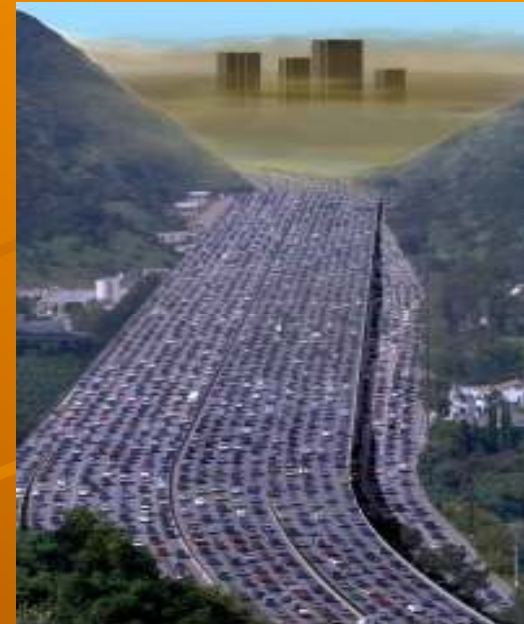
Why do we need it now?

Climate Change



- Clean at the point of use
- Can use green electricity
- Will be able to use local power generation
- Reduces carbon footprint
- Lasts for generations

Congestion



TramTrain ticks all the boxes

"TramTrain – Leeds' Catch up Opportunities"

Pollution



No tail pipe emissions
Reduces the immediate pollution

Reduces death on the pavement,
No "Oslo Effect"

Year on year savings to health costs
Release funding for other health projects etc.,

Increases the ambience of the city streets
Improves liveability of the immediate & surrounding area

Significant Modal switch 28% -
31% DfT

TramTrain ticks all the boxes

"TramTrain – Leeds' Catch up Opportunities"

Health Costs



153,000 respiratory deaths,
mainly young & old *British Thoracic Report*

*Figures show between 25% - 40% of
deaths due to "Tail Pipe emissions"
(38,250 – 61,100 deaths) UK Government*

*TramTrain will help prevent
"Death on the Pavement"
"Oslo Effect"*

*To burn carbon is to pollute
Is this where it will all end?*

TramTrain ticks all the boxes

"TramTrain – The Opportunities"

So what does a TramTrain offer a city?

Regeneration

Karlsruhe



Increased retail footfall 30% +

*A planned & controlled
transport mode*

*Political statement
not easily broken*

*A serious inward
investment infrastructure
statement*

*Enhancement of people
movement*

*Improves the ambience
& air quality.*

TramTrain ticks all the boxes

“TramTrain – Leeds’ Catch up Opportunities”



**TramTrain
Karlsruhe
1961**

**TramTrain
Karlsruhe 2016
500 KM in operation**





- Street running adjacent Leeds Station/Gateway to provide additional passenger capacity
- Longer term requires increased train paths
- Can be provided by using tram/train to route local services onto city centre streets
- Taking passengers closer to their destinations and freeing up capacity.



Tram-train Investment

- Tram-train conversion for:
 - Harrogate Line / Extension to the Airport
 - New alignment to the Lower Aire Valley and Five Towns
- More affordable solution to increase capacity compared with heavy rail
- Better city centre accessibility, solution helps to alleviate platform capacity constraints at Leeds station
- Value for Money solution – requires less subsidy



Harrogate Line

- Identified as a priority for conversion
- To include a direct link to LBIA from Leeds (cost of £17m-£25m)
- Indirect link from Harrogate/York to LBIA (interchange at Horsforth)
- On street alignments into Leeds City Centre and York Development sites
- Frequencies of up to 6tph into Leeds, 4tph into York
- Interface with open access operators



“TramTrain – Leeds’ Catch up Opportunities”

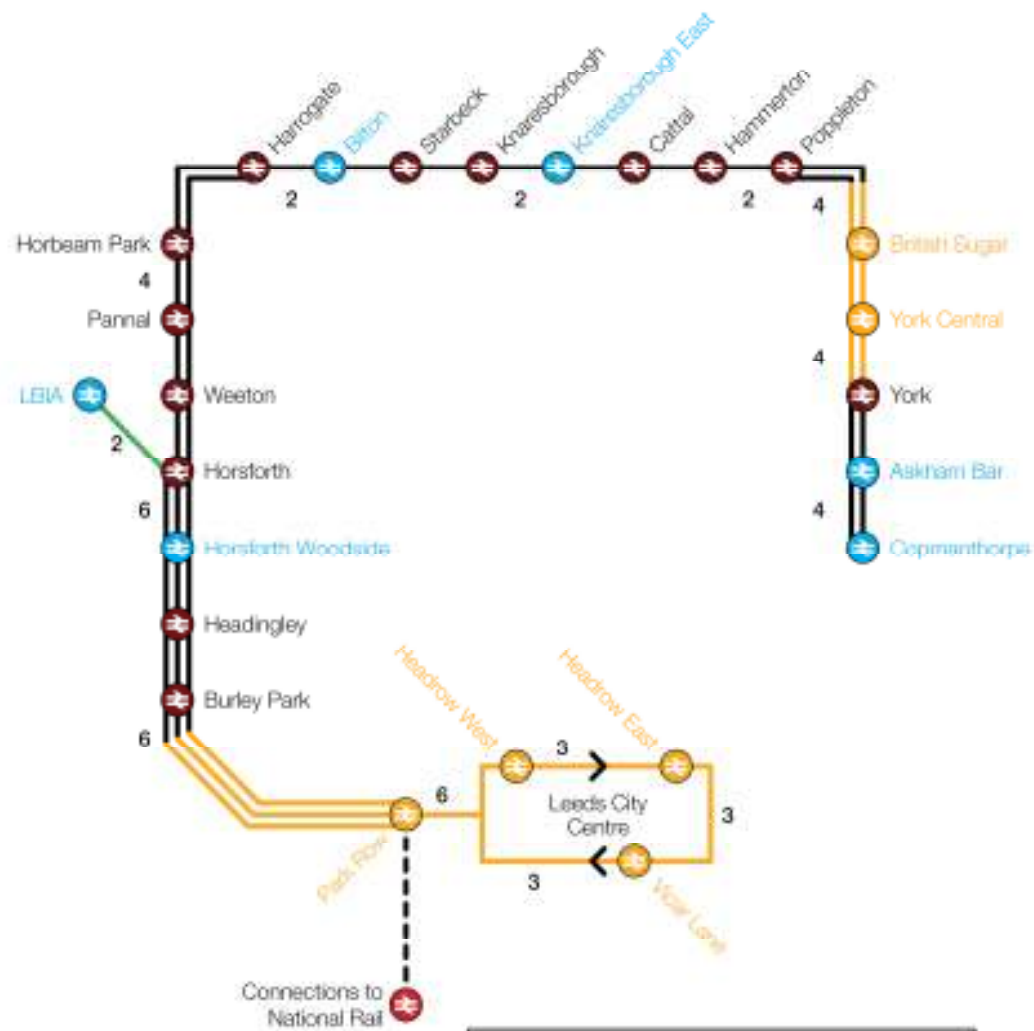
TramTrain can be used as a “starter line”



City Centre Loop Options



Possible Network



Key:

Conversion of heavy rail alignment	—
Connections to National Rail	- - -
New alignment	—
On-street Running	—
Existing Station	⊕
Proposed Station	⊕
Proposed On-Street Station	⊕
Trains per hour	6



“TramTrain – Leeds’ Catch up Opportunities”

A success story Greater Manchester



“TramTrain – Leeds’ Catch up Opportunities”

Greater Manchester A centre for agglomeration

Sheffield – Leeds – Greater Manchester – Warrington – Liverpool/Chester

Potential Rail North East West alternative corridor



Sheffield
In Place & Expanding



Leeds
Missing!



Greater Manchester Core in place,
TramTrain planned for Marple &
Hyde and Stockport



Warrington & Halton
Actively Planning



Street running Trials 2016



Liverpool City Region

"TramTrain – Leeds' Catch up Opportunities"

Summary

The technology works

A step change in thinking & outlook

It needs funding £173m as a starter, lobbying, campaigning, sales & marketing

Use UKTram methods of construction including "Stopping the Tram"

It is cheaper considering the long term outlook

It has many applications

Has all the benefits of a Tram+

The attractions of the Train+

All it Needs is you to do it!

TramTrain ticks all the boxes



**Will TramTrain use in
Urban Transport in the near future make this a Sunrise
or a Sunset for Tramways and Urban living?**

**Doing Nothing is not an Option !
Getting it wrong is unforgiveable.**

– its your world !

Apollo June 1996

Thank You for Listening.

Any

Questions ?



A copy of this presentation is available as pdf on
www.applrguk.co.uk