



*A
Presentation
of the case for and applications of*

Tram Train

A low cost, clean, sustainable mode

for Cheshire, Warrington & Merseyside

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LRTA

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What is a TramTrain ?

A
mode that has been around
from the late 19th Century.



Trams using heavy rail infrastructure



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Key Benefits of the technology

- ◆ An almost new concept in the UK
- ◆ Most of the technical problems have now been solved
- ◆ Operating costs are lower, line of sight etc.,
- ◆ Environmental benefits
- ◆ High Modal switch
- ◆ Carbon Credits
- ◆ Increased retail footfalls 35% +
- ◆ New connectivity



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Key Benefits of the technology

- ◆ Cost effective use of existing underused heavy rail assets with overall reduction of the maintenance cost base
- ◆ New street running infrastructure providing seamless access to the heart of the urban areas
- ◆ Capacity relief at congested heavy rail stations – Manchester Hub in particular
- ◆ Provision of frequent, reliable and inter-urban links



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Are there any modern examples in the
United Kingdom?



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The first application, second generation

Conversion of former heavy rail alignments

Track Sharing

- No street running –

A comparatively low cost option



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Conversion of former heavy rail alignments
+
street running



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*The UK
has TramTrain!
so what is all the fuss about?*

*We need the next
generation of street
running TramTrains*

Why?

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Why do we need it now?

Climate Change
Congestion
Peak Oil
Pollution
Health Benefits
City Centre Access



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Climate Change



Trams tick all these green boxes

Clean at the point of use

Can use green electricity

Will be able to use local power generation

Reduces carbon footprint

High modal switch 28% -32%

Lasts for generations



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Congestion



Trams tick all these green boxes

Clean at the point of use

Can use green electricity

Will be able to use local power generation

Reduces carbon footprint

Lasting social legacy for generations



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Pollution



Trams tick all these green boxes

No tail-pipe emissions

Eliminates death on the pavement

Significant modal switch 28% - 31% DfT

Increases the ambience of the city street



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Health Costs



- ◆ British Thoracic Society report 1998
- ◆ 153,000 respiratory illness deaths, mainly young & old
- ◆ Govt figures show between 25% - 40% are deaths cause by “Tail Pipe emissions”

(38,250 – 61,100 deaths)

*Trams prevent
“Deaths on the Pavement”*

*To burn is to pollute
Is this where it all ends?*



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Peak Oil



World demand –
BRIC countries will need **60% +**
of all known world reserves.

What is Peak Oil?

When world oil production
reaches its maximum level.

What is Midpoint depletion?

Roughly half the oil ever to be produced
– the decline is now !

**Decline has started,
Full impact around
2020**



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What Technology is there
readily available
and off the shelf ?



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Diesel.



Schwerin



Normandy

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Diesel Generator/Electric



Blue TramTrain Kassel



Diesel TramTrain Kassel

For less than 10km new track a new Traffic system of 122km was created! NVV.



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Electric/Electric



Dual Voltage 25kv & 750v Karlsruhe



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What kind of track sharing is there?

Electric/Steam/Diesel/Freight

Nordhausen – East Germany

A solution to regeneration – who needs new roads?





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Electric/Battery/Accumulator



Nice,



Bordeaux



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Stored Energy.



Stourbridge England

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Potential TramTrains Routes - NW

- ◆ *Altrincham - Chester
- ◆ *Marple – Manchester – East Lancs - Haydock
- ◆ *Haydock – Warrington – Irlam – Cornbrook
- ◆ Daresbury Laboratories - Runcorn Busway
- ◆ Runcorn – Mersey Gateway – Widnes – Burtonwood – St Helens
- ◆ Daresbury – Frodsham – Halton Curve - Chester

- ◆ Various alignments.



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Quick wins

Altrincham - Chester



- ◆ Re signaling @ Altrincham
- ◆ Low engineering costs
- ◆ Vehicles almost fit already!
- ◆ Fit under floor generators
- ◆ Use surplus T68 & M5000
- ◆ Park & Ride @ Stations
- ◆ Additional PR M6 – Highways Agency
- ◆ Capacity during peak times
- ◆ Two way retail footfall increase
- ◆ Reduction of traffic

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Quick wins

***Marple – Manchester - Haydock M6 P+R**



- ◆ Low engineering costs
- ◆ Street Running Stockport - City
- ◆ Avoids Manchester Rail Hub
- ◆ **Use proposed guided Leigh busway**
- ◆ **Funding in place from guided bus**
- ◆ **Cross City route**
- ◆ Capacity during peak times
- ◆ Two way retail footfall increase
- ◆ Reduction of traffic
- ◆ Freight Tram distribution



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Low cost wins

- *Haydock M6 P+R**
- Newton Le Willows**
- Warrington M6 J21 P + R, – Irlam**
- Cornbrook**
- Manchester City**

- ◆ **Use proposed guided Leigh busway**
- ◆ **Funding in place from guided bus**
- ◆ Potential expansion Warrington J21 M6 P+R via Newton le Willows Rail Site
- ◆ J21 M6 P+R via Irlam & Cornbrook
- ◆ Capacity during peak times
- ◆ Two way retail footfall increase
- ◆ Reduction of traffic
- ◆ Freight Tram distribution



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Low cost wins

Daresbury Campus Group



- *Sustainable energy, South facing buildings*
- *Invite photo voltaic supplier (Wrexham)*
- *Establish internal TramTrain*
- *Link Cheshire line to Moore & Warrington Bank Quay*
- *Link Cheshire line to Frodsham to Chester*
- *Build a low cost interchange station at the Halton Curve to Liverpool*
- *Link to Converted Busway Runcorn*



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Halton

Low Cost Wins

Runcorn Busway & Mersey Gateway

- *Already designed for Light Rail*
- *Access to workforce locally*
- *Easy link onto Mersey Gateway*
- *Gateway designed to take retrofit Light Rail*
- *TramTrain links to Liverpool*
- *Pathway exists from Widnes to St Helens*
- *Via Burtonwood /Omega development*
- *High quality development not dependant on roads*



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Warrington Tram *(Incremental)*

1. **P + R M6 Junct 21 – Birchwood - M62 Junct 11 (Tip Site)**
2. **P + R M62 Junct 11 – Newton-le-Willows – Haydock P + R**
3. **P + R M6 Junct 21 – North Bank Ship Canal Alignment – Bank Quay**
4. **Newton-le-Willows (Distribution Centre) – Burtonwood (Omega)**
5. **Burtonwood (Omega) – M62 Junct 8 - West Warrington (Via Gemini and other various route options) – Bank Quay**
6. **Bank Quay – Golden Gates – Bus Stn – Winwick Rd – P + R M62 Junct 9 – Burtonwood (Omega)**
7. **Bank Quay – Fiddler's Ferry – Halton LR**
8. **P + R Preston Brook – Daresbury – Bank Quay**
9. **Various Route Combinations of above**



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*They are looking at the future –
Are you?*

Pay Now or Pay Later !



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Thank You for
Listening
Any Questions?

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