Warrington Tram

The alternative to Urban Road Transport Pollution

A better value scheme than the Western Link Road

Light Rail (UK)

A

short presentation by

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Warrington Pollution, A Tram Solution

Light Rail(UK)

An association of :-

Light Rail Consultants
Transport Engineers
Politicians
Academics
Environmentalists

Commercial Specialists in Affordable & Sustainable Tramways

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Urban Transport Corridor Pollution

- There are two main Transport Corridor Pollution (UTC).

1. "Tail – pipe emissions

2. Road, Tyre & Brake Dust

(Often Known as the "Oslo Effect)

Trams & TramTrain ticks all the boxes

Urban Transport Corridor Pollution

'OSLO Report' Summary 1998

- *Undertaken 1998 based on figures from 1996 and projected to date (2006)*
- Particles are divided into five main categories

1. *Exhaust from combustion engines*
2. *Asphalt wear*
3. *Tyre wear*
4. *Brake wear*
5. *Fine grinding of larger particles already torn loose from the road surface (Potholes are the main culprit)*

Tram & TramTrain ticks all the boxes

Urban Transport Corridor Pollution

- **Exhaust from Combustion Engines:**

  A total 75% (99.75tons/year) are from private cars, and 25% (33.25ton/year) from buses and taxis.

  A total of bus & taxi emissions of **332.5 tons** in 2006

- **Brake wear:**

  A total 90% (49.5 tons) are from private cars,

  5.5 tons (10%) from buses and taxis.

  A total of bus & taxi wear of **55 tons** in 2006

Urban Transport Corridor Pollution

- **Fine grinding of larger loose particles from the road surface:**
  A total 94% (73.32tons) are from private cars, 4.68tons (6%) from buses and taxis.
  A total of bus & taxi wear of **46.80 tons** in 2006

- **Asphalt wear:**
  A total 93% (166.47tons) are from private cars, 12.53 tons (7%) from buses and taxis.
  There was **no** reduction in the bus calculation, as bus & trolley bus do not use studded tyres.
  A total of bus & taxi wear of **125.3 tons** by 2006

- **Tyre wear:**
  93 % (107.88 tons) are from private cars, 8.12tons (7%) from buses and taxis.
  A total of bus & taxi wear of **81.20 tons** in 2006

Trams & TramTrain ticks all the boxes

Urban Transport Corridor Pollution

- Each time a tyre rotates, it loses a layer of rubber about a billionth of a metre thick.
- If you do some numbers, this works out to about four million million, million carbon atoms lost with each rotation.

A busy road with 25,000 vehicles travelling on it each day will generate around nine kilograms of tyre dust alone per kilometre.

Urban Transport Corridor Pollution

Summary

- ***The total tonnage for in the Oslo urban area in 2006 were as follows:-***

- ***-Exhaust from combustion engines 332.5 tons***
  -Asphalt wear 125.3 tons
  -Tyre wear 81.20 tons
  -Brake wear 55.0 tons
  -Fine grinding of larger particles already torn loose from the road surface 46.80 tons

Total Pollution
640.8 tons

Urban Transport Corridor Pollution

Air Pollution

Benefit of a Tram

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

Tram & TramTrain ticks all the boxes

Urban Transport Corridor Pollution

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

Trams & TramTrain will help prevent
Death on the Pavement
"Oslo Effect"

To burn carbon and road grind is to pollute
Is this where it will all end?

Tram & TramTrain ticks all the boxes

Western Link Road Urban Transport Corridor Pollution

The Warrington Tram Solution ©

Western Link Road Urban Transport Corridor Pollution

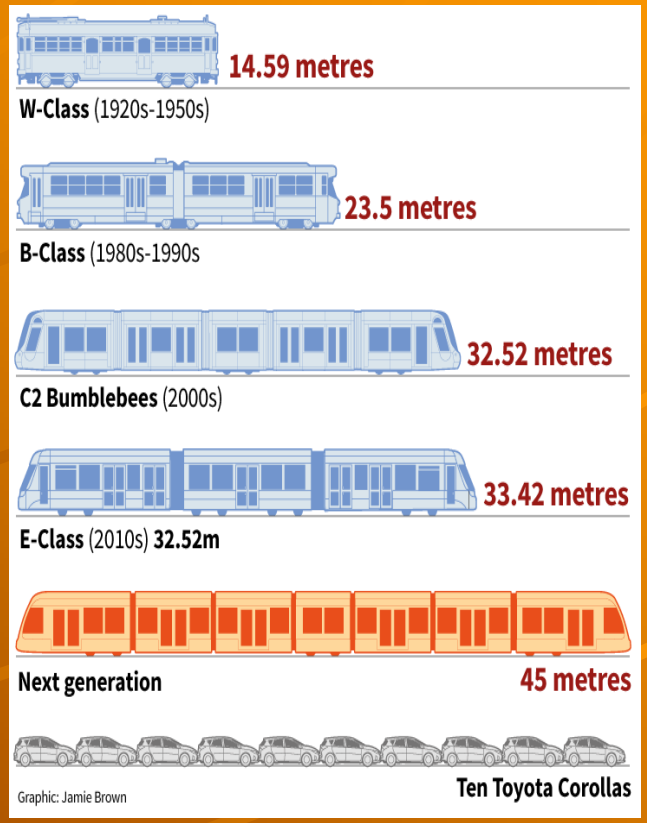
Purpose & Requirements

A Cross Party willingness to achieve goals

Comply and improve Air Quality in Warrington and District

Reduce the 95 UTC pollution related deaths per year

Improve town connectivity



Western Link Road Urban Transport Corridor Pollution

Purpose & Requirements

Stop Road Traffic "Rat Running" (Signage)

A re allocation of road space, Green Wave traffic lights at junctions

Re routing and integrating of some bus services

Multiple P + R at termini and line of route

What would these Trams look like?

They would not be like the big light rail cars used in Manchester, Croydon Edinburgh or Sheffield

They would be smaller units suitable for their role of circulating passengers among Warrington locations without dominating the city

They would stop every 75 metres to give short walking distances and they operate safely in pedestrian areas and in mixed traffic.

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Connectivity + Development

Today the electric tram has re-emerged as a catalyst for redevelopment of struggling areas, encouraging denser development that makes the areas they serve efficient in land use and attractive places to live.

The Warrington Tram Solution

What can it do for Growth & Regeneration?

Small tram systems do increase the amount of development in an area and make the development much more effective.

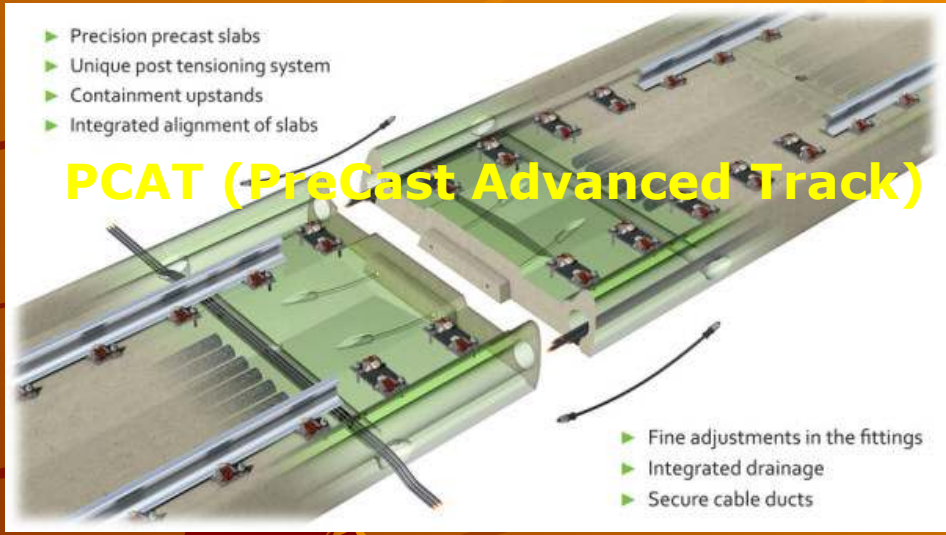
Areas along the Route Line are more likely to be high density, to offer a mix of commercial and residential uses and give developers the chance to build efficiently with fewer parking spaces needed.

This proposed system of operations, can mix modern town trams & TramTrain to provide last mile connectivity

The Warrington Tram will enable “Northern Rail” connectivity

..and new ideas are being developed in the UK

Track - keep it simple and quick



Utilities left in situ

Western Link Road Urban Transport Corridor Pollution

For the current price of the Western Link Road

at today's estimate of £212Million, this could buy approximately

70 kilometres of tram for Warrington

(£3Million per Track Kilometre inc depot etc)

Experience from other cities
Learning from success…

Dedicated team with long-term vision

Good integration with other modes of transport

A clear understanding of what local transport can achieve

Building on success, Line 2 +

Warrington Tram (Incremental)

1. P + R M6 Jct 21 –Birchwood -M62 Jct 11 (Tip Site)
2. P + R M62 Jct 11 –Newton-le-Willows –Haydock P + R
3. P + R M6 Jct 21 –North Bank Ship Canal Alignment
   –Bank Quay
4. Newton-le-Willows (Distribution Centre)
   –Burtonwood (Omega)
5. Burtonwood (Omega) –M62 Jct 8 -West Warrington
   (Via Gemini and other various route options)
   –Bank Quay
6. Bank Quay –Golden Gates –Bus Stn
   –Winwick Rd
   –P + R M62 Jct 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 (Subject to study)
10. P+R as available along line of route (local traffic)

Western Link Road Urban Transport Corridor Pollution

Next Step

A Pre Feasibility study by an independent consultant
Quotes from Tram Vehicle Manufactures, Track Suppliers
Mayor to Champion project

Western Link Road Urban Transport Corridor Pollution

Get good advisors – challenge them, stick with them
- Start public consultation early
- Get a well-kent local Public Face for the project
- Be willing to revise the route to support developments
- Get the bus, rail and highway authorities on side
- Think of it as a 'Starter Line'
- Inexpensive does not have to mean cheap-and-nasty
- Think of the added "X" factor for subsequent "UK City of Culture" type bids

Getting started in Warrington
Potential funding sources

Western Link £212 Million
+ Community Infrastructure Levy,
Tax Incremental Financing
Grant from UK Government via
Transport Development Fund
Developer Contributions (Section 75)
Regional Growth Fund
Funding for Sustainable Transport (UK Govt)
Workplace Parking Levy, Green Investment B
A range of Private Investors

This not an exhaustive list and will change
as schemes are introduced, ended, replaced etc.,


Thank You for Listening
Any
Questions ?
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