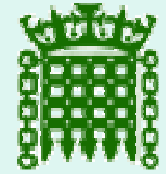


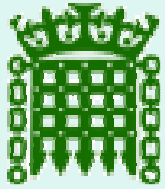
*All Party Parliamentary
Light Rail Group*



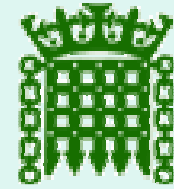
Low Cost Affordable Trams

Tony Young

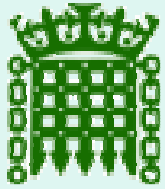
Independent Light Rail Consultant



All Party Parliamentary Light Rail Group



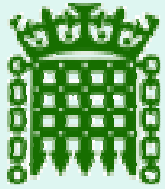
- ***Is there a role for lower cost simpler technology tram systems?***
- ***Why are more tram systems being built in France, Spain and North America, even in relatively small cities, while in the UK more systems are cancelled than are built?***
- ***Can we obtain the economic and environmental benefits that cities across the world are enjoying?***
- ***Is there a truly level playing field?***
- ***Can we remove the barriers to achieve typical continental practice?***



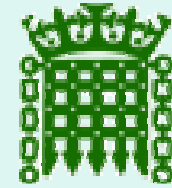
All Party Parliamentary Light Rail Group



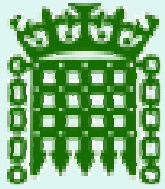
- *Is there a role for lower cost simpler technology tram systems?*



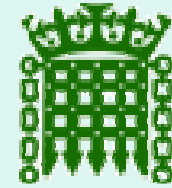
All Party Parliamentary Light Rail Group



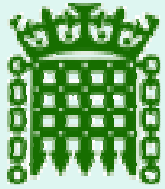
High cost trams – c.£2m



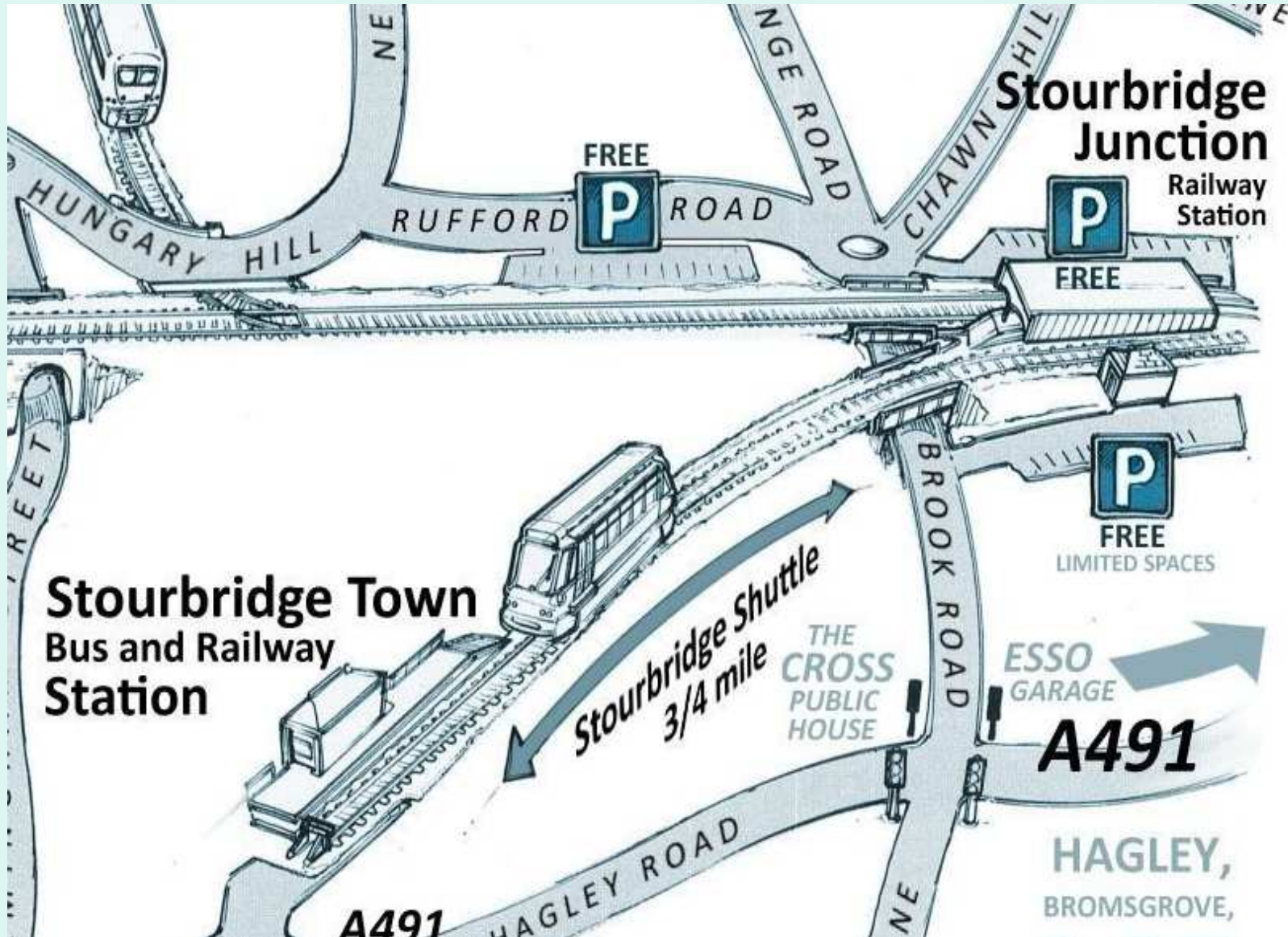
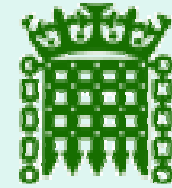
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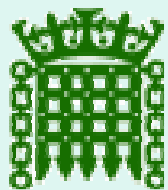


Low cost trams – c.£0.1 - £1m



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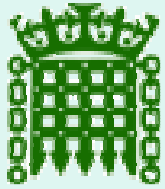


PPM60 Class 139 in service

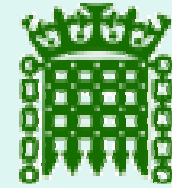
- 6 trains per hour all day
- 10,000 passengers per week (21% increase)
- 99.6% reliability
- Fuel consumption, <1 gallon per hour (less than $\frac{1}{3}$ DMU)
- Low CO₂ emissions (240kg/day cf 809kg/day for DMU)
- Leasing cost less than half previous class 153
- Total annual service cost £500,000 (cf £918,000 for 153)
- Save £3million over life of franchise



Funding obtained for 100 passenger 18m 4-axle unit.



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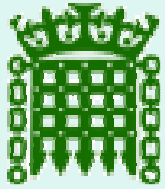


Potential market for lower cost light rail/trams

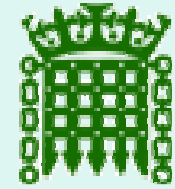
Aberdeen
Barking
Bedford
Belfast
(Birkenhead)
Birmingham
Blackpool
Bournemouth
Bradford
Brighton
Bristol
Cambridge (u/c)
Cardiff
Chatham
Chelmsford
Chester
Cleveland
Corby
Coventry
Crawley
Dartford
Doncaster
Dundee

East Lancashire
Edinburgh (u/c)
Exeter
Gateshead
Glasgow
Gloucester
Guildford
Kettering
Kingston upon Hull
Kingston upon Thames
Lancaster
Leeds
Leicester
Liverpool
Llandudno
London-Croydon
London - Docklands
London - Cross River
London – West London
London – Oxford Street
Luton
Maidstone
Manchester
Middlesborough

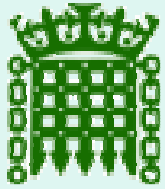
Milton Keynes
Newcastle upon Tyne
Norwich
Nottingham
Oxford
Plymouth
Portsmouth/Fareham
Preston
Reading
Runcorn
Sheffield
Southampton
Southend
Stoke on Trent
Sunderland
Swansea
Swindon
Plymouth
Walsall
Watford
West Midlands
Weymouth
Wimbledon



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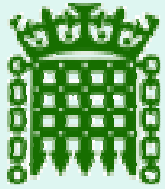
- *Why are more tram systems being built in France, Spain and North America, even in relatively small cities, while in the UK more systems are cancelled than are built?*



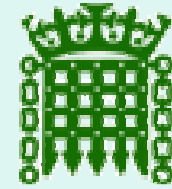
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- ***Why are more tram systems being built in France, Spain and North America, even in relatively small cities, while in the UK more systems are cancelled than are built?***
- ***Funding mechanisms***
- ***Local decision making***
- ***Wide political support***



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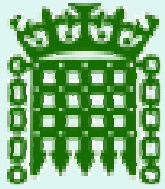
Funding mechanisms

France - Versement Transports

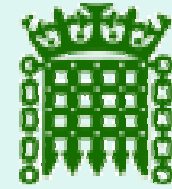
- 1973 - 300,000 inhabitants
- 1974 - 100,000 inhabitants
- 1982 - 30,000 inhabitants
- 1992 - 20,000 inhabitants
- 1999 - 10,000 inhabitants

UK

- TPP, Section 56, PFI, PPP,
TIF (mk 1), TIF (mk 2), etc



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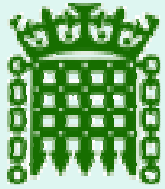


Funding mechanisms

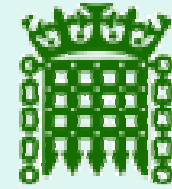
TIF (mk 1): Transport Innovation Fund

TIF (mk 2): Tax Increment Financing

- new powers for local authorities to borrow against predicted future growth in their local business rates arising from regeneration or infrastructure enhancement.



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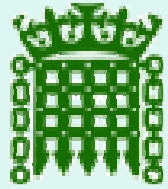


Funding mechanisms

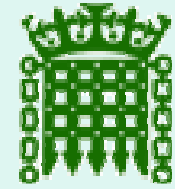
- *Government grants*
- *Government loans*
- *European grants*
- *European loans*
- *Private sector contributions*
- *Prudential borrowing*
- *Congestion charge*
- *Workplace parking charge*
- *Land tax/rates*
- *Development gain*
- *Sales tax*
- *Fuel tax*
- *Employer tax*
- *Bond issues*

hypothecation.....

predictability.....



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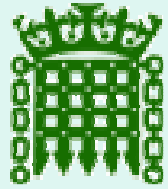


Local decision making

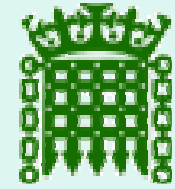
- ***Central Government/Federal/National***
- ***State Government/Region/Länder***
- ***Local Government/County/City***

In UK, central government control is absolute!

(except in Wales & Scotland!)



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Wide political support

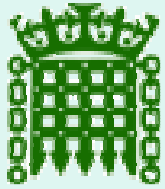
- ***political champion needed***

e.g. French Mayors, Ken Livingstone!

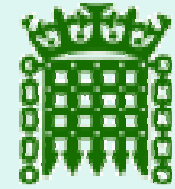
- ***political consensus essential***

e.g. Greater Manchester

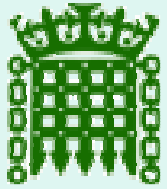
- ***car culture still to be overcome.....***



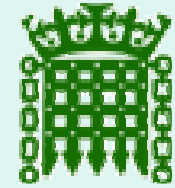
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- *Can we obtain the economic and environmental benefits that cities across the world are enjoying?*



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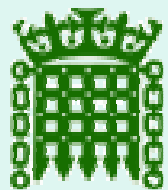
A tale of two cities....



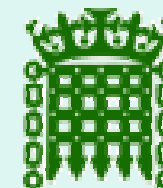
Freiburg Minster c.1200



York Minster c.1220

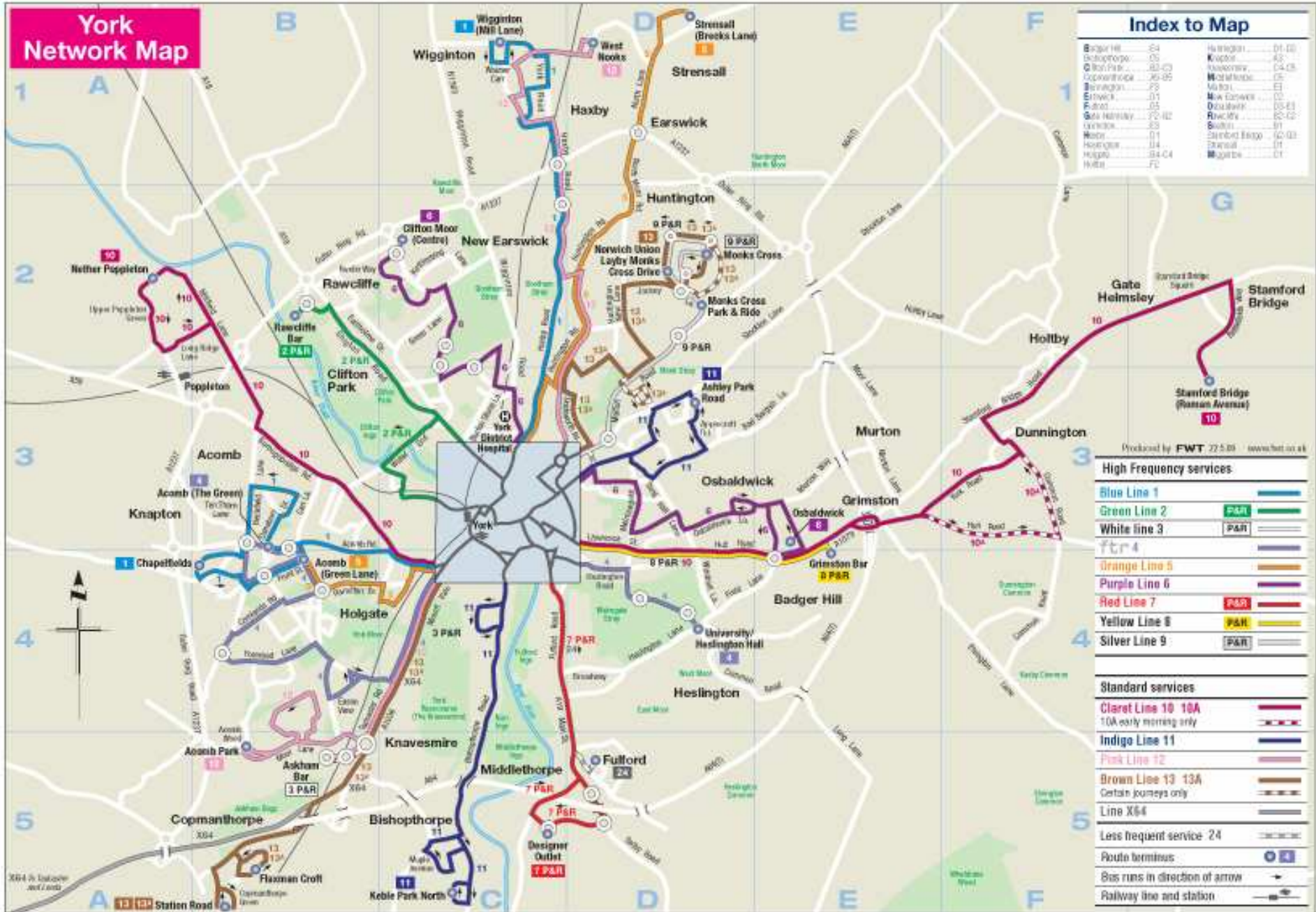


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	York	Freiburg
Population	199,000	220,000

York Network Map



Index to Map

Binger Hill	54	Huntingdon	01-03
Octopopus	05	Knapton	43
0 Bar Park	33-33	Knobcross	14-15
0 Goodwin	35-35	Mosby	05
Barnington	28	Mosby	01
Braywick	01	New Earswick	02
Clifton	05	Osby	03-03
Gate Helmsley	72-02	Rawcliffe	02-02
London	23	Stamford	01
North	01	Stamford Bridge	10-03
Northgate	14	Stamford	01
Holgate	34-04	Stamford	01
Hill	70		

Produced by FWT 27.5.01 www.fwt.co.uk

High Frequency services

Blue Line 1	Blue line
Green Line 2	Green line with P&R
White line 3	White line with P&R
ft4	Blue line
Orange Line 5	Orange line
Purple Line 6	Purple line
Red Line 7	Red line with P&R
Yellow Line 8	Yellow line with P&R
Silver Line 9	Silver line with P&R

Standard services

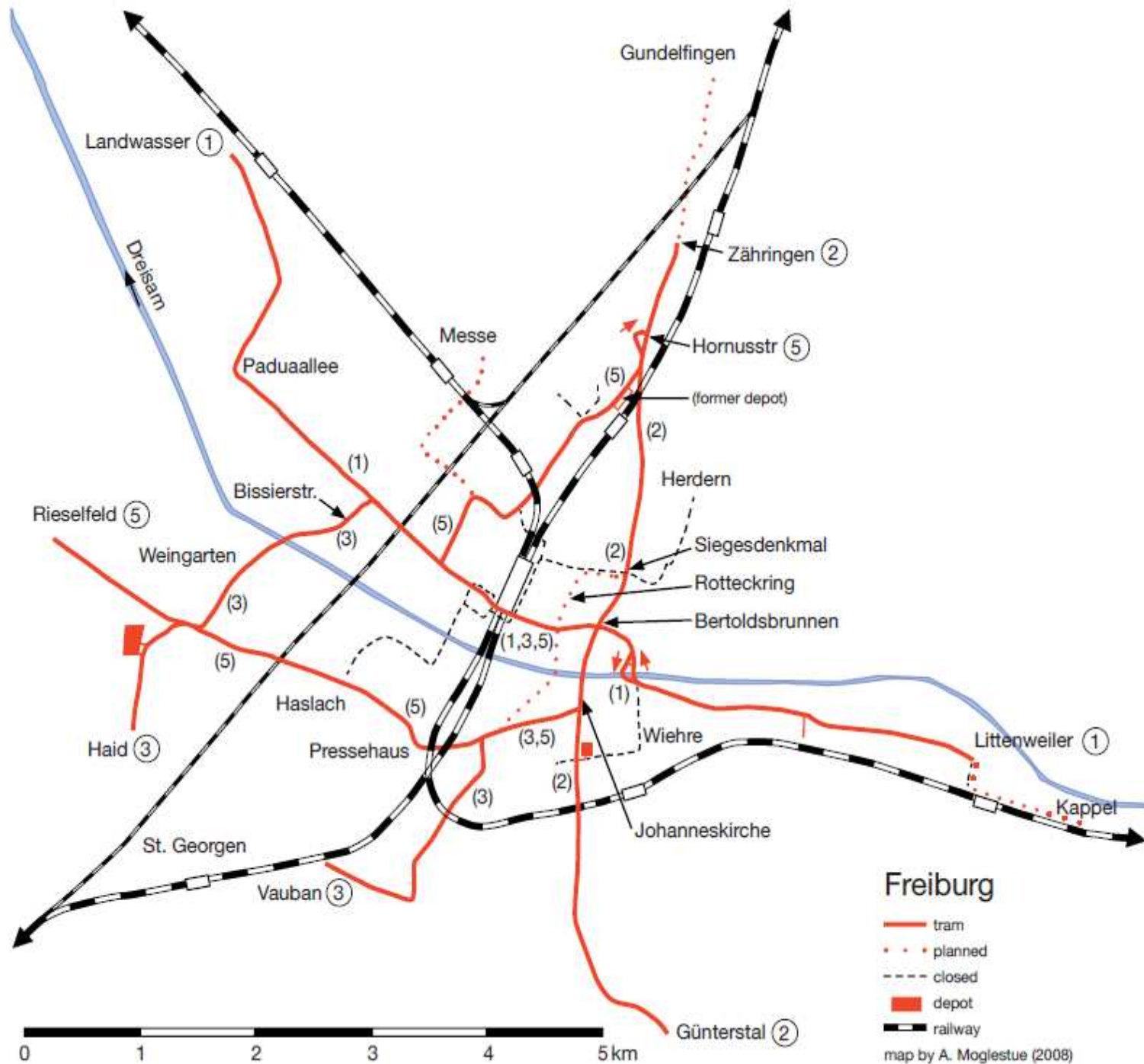
Claret Line 10 10A	Claret line
10A early morning only	Claret line with dashed border
Indigo Line 11	Indigo line
Pink Line 12	Pink line
Brown Line 13 13A	Brown line
Certain journeys only	Brown line with dashed border
Line X64	Grey line

Less frequent service 24

Route terminus: Circle with 'T' symbol

Bus runs in direction of arrow: Arrow symbol

Railway line and station: Line with station symbol



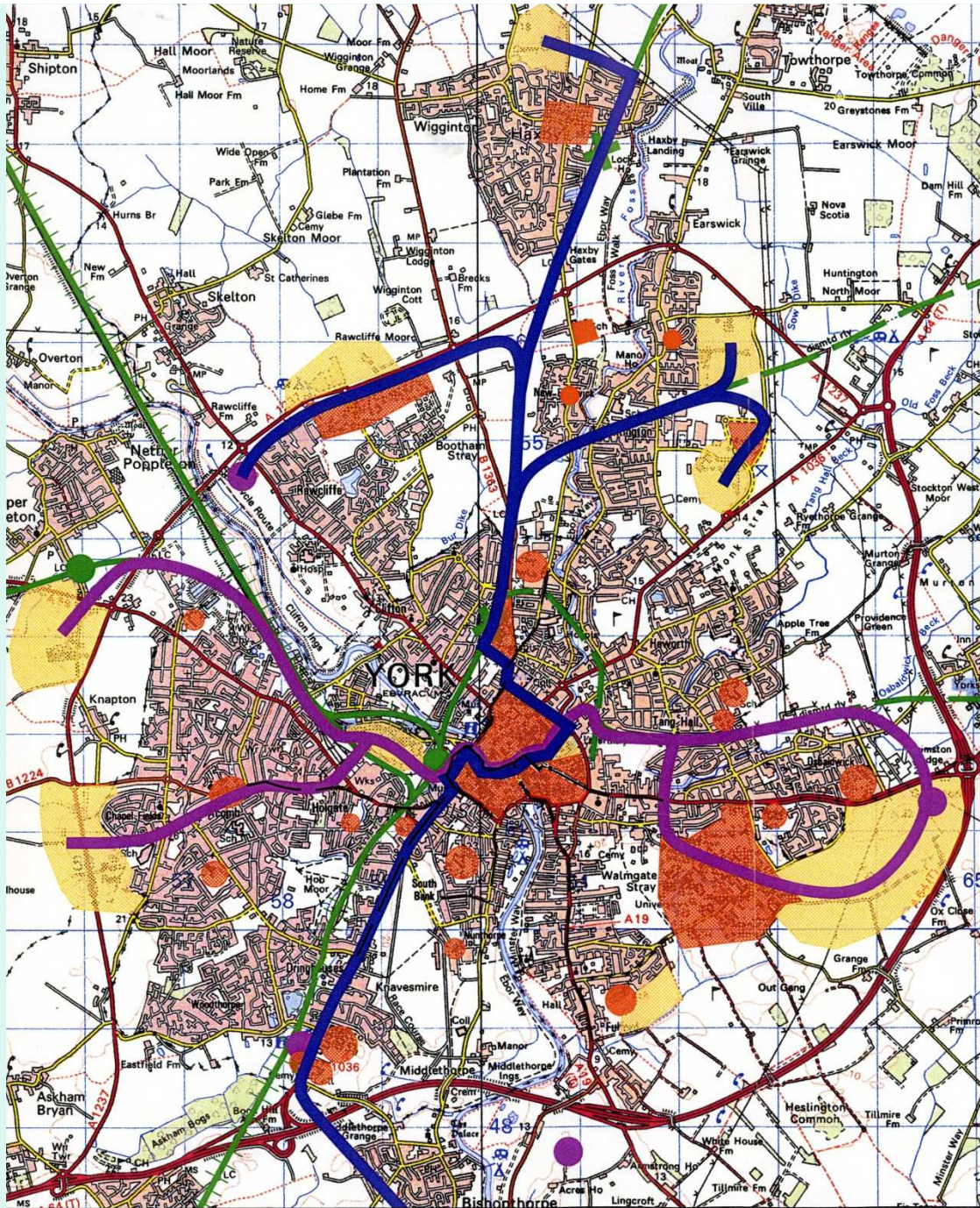






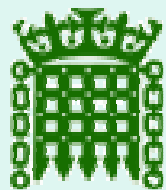




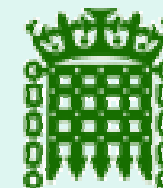




PROJECT :- York Mass Transit Scoping Study



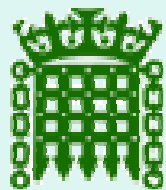
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Modal split, %

Mode	York	Freiburg
Pedestrian	16	24
Cycle	13	28
Car	52	29
Public transport	8	18*
Other	11	1

* 20% by 2020



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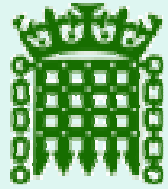


What do York residents think?

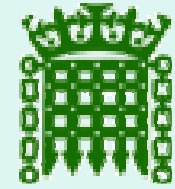
Congestion is the most important transport challenge (81%)

Improving public transport is the most important action (73%)

LTP3 Consultation, December 2009
12,000 responses



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What do York Councillors think?

‘Financial pressures should not obstruct long term vision’

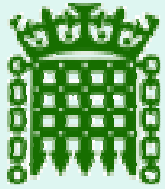
‘We need to look forward and consider more radical approaches if we are to solve the transport issues facing York’

‘French cities of Dijon and Brest joined forces to buy 52 trams’

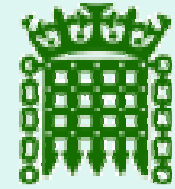
Councillor Christian Vassie

‘Government has discounted possibility of tram network for Leeds City Region which includes York’

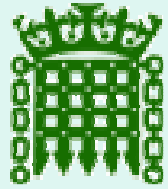
Councillor Steve Galloway



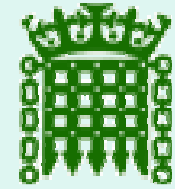
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➤ *Is there a truly level playing field?*

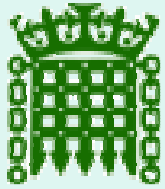


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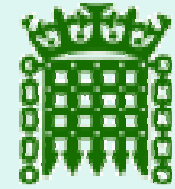


Is there a truly level playing field?

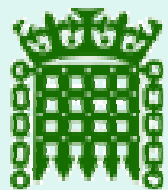
The M4 bus lane!



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	Cost increases	Decision
<i>Highway schemes</i>	<i>25% to 158%</i>	<i>None scrapped !</i>
<i>Tram schemes</i>	<i>26% to 38%</i>	<i>All scrapped !</i>



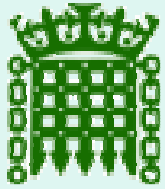
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- Light rail disadvantaged by appraisal system
- Appraisal processes fail to take account of full range of benefits
- Differential treatment in levels of local contribution and utilities betterment
- Action needed to ensure fair treatment for trams
- Stronger partnership needed between DfT and UK tram

Light Rail & the City Regions Inquiry

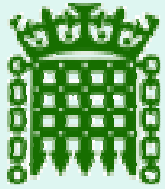
APPLRG , February 2010



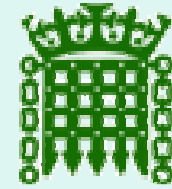
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- *Can we remove the barriers to achieve typical continental practice?*



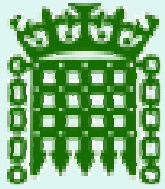
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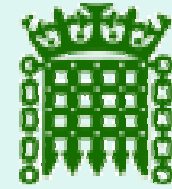
Can we remove the barriers to achieve typical continental practice? – what are the barriers?

- **Funding**
- **Transport & Works Act**
- **Coordination of transport and land use planning policies**
- **Traffic restraint**
- **Integration with other modes of transport**

House of Commons Eighth Report on Light Rapid Transit, 2000



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Another barrier!

- **Statutory undertakers diversions**

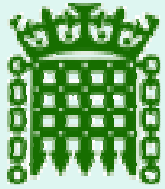
'The Department must urgently reconsider the contribution utilities make to service diversions'

10th HCTC Report 2005

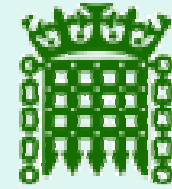
'We are concerned that the position on utilities is unchanged since 2005'

APPLRG Report, February 2010

GMPTE spending £80 million on utility diversions for Phase 3 extensions

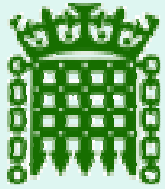


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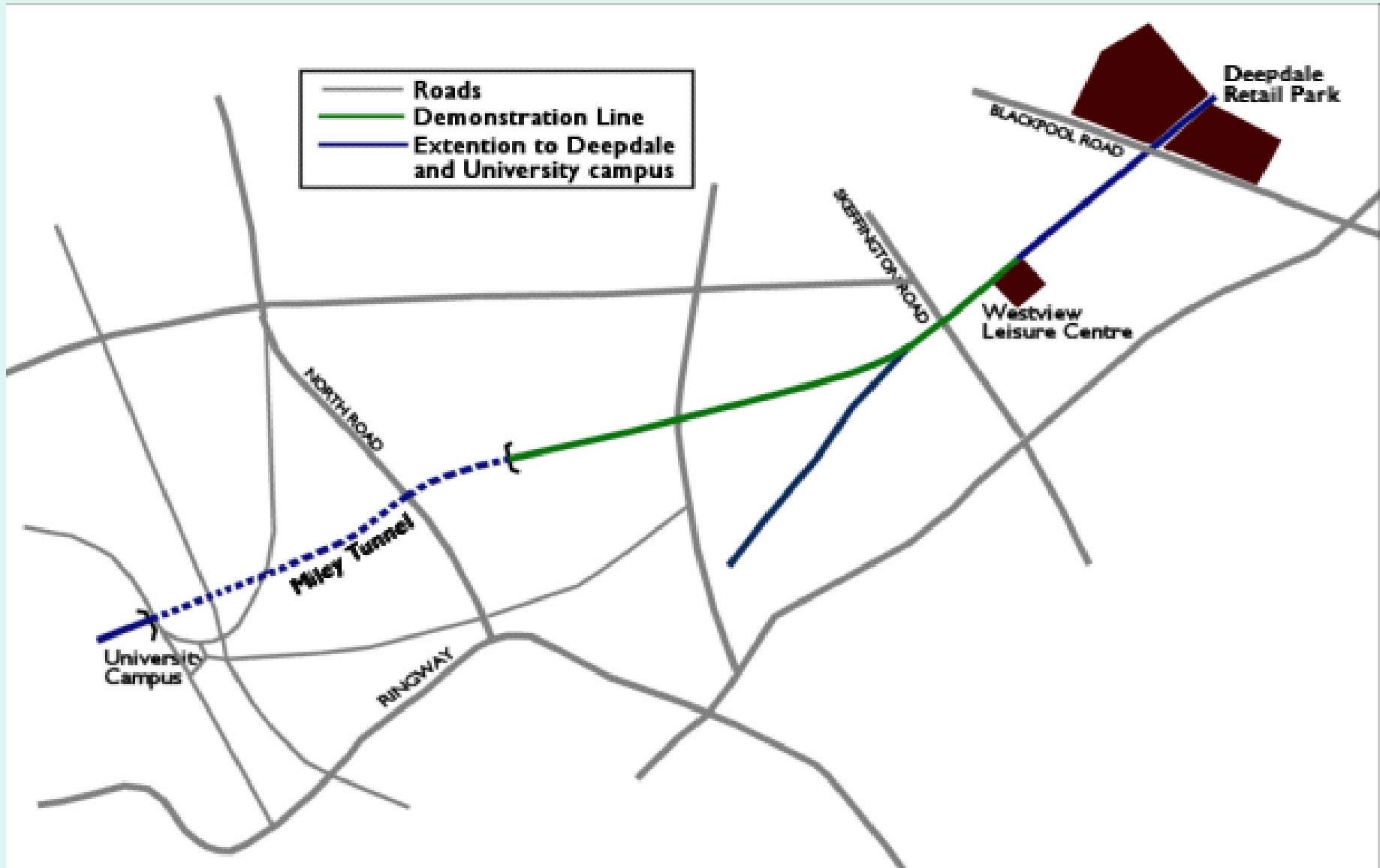
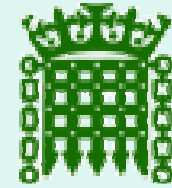


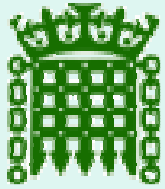
Preston Trampower – can the barriers be overcome?

- *‘planning for the first phase has been granted by Preston City Council’*
- *‘Negotiations with Network Rail on track lease proceeding’*
- *‘Preston is set for a tram revolution as soon as December’*

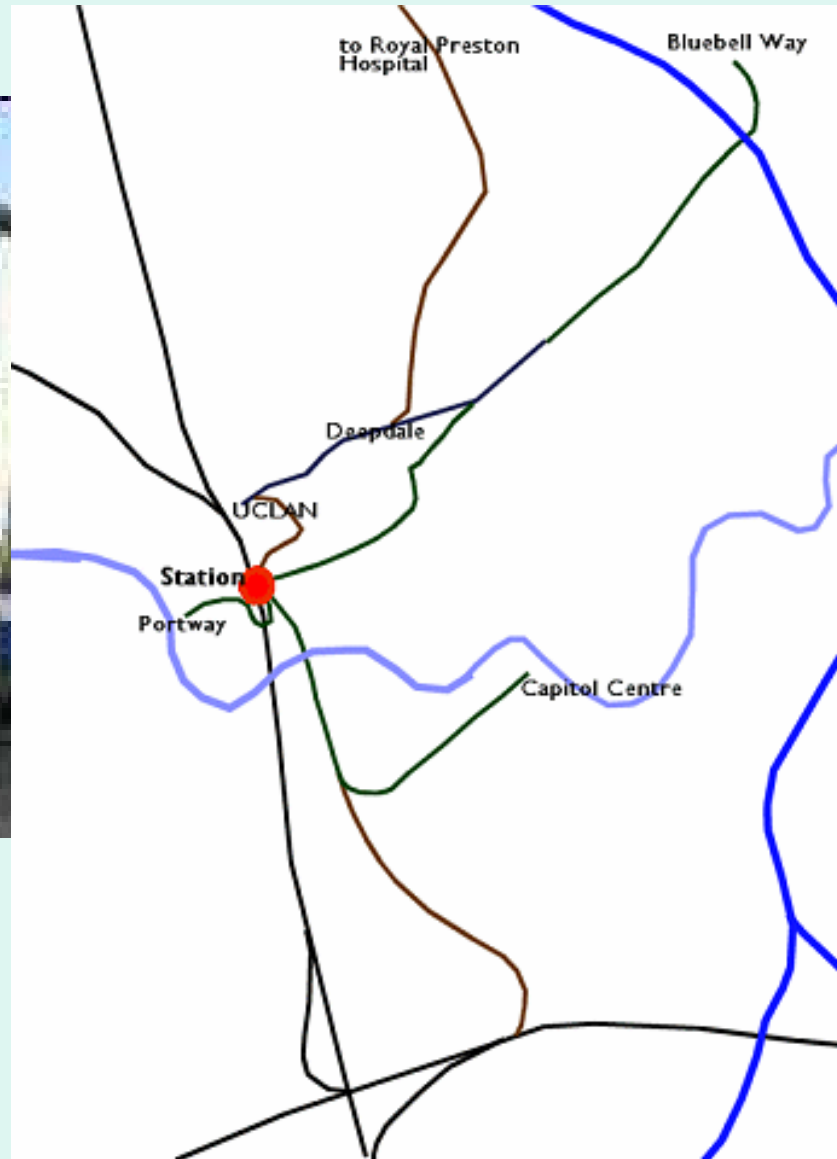
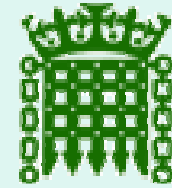


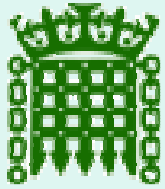
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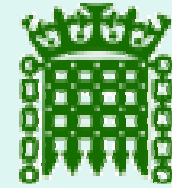


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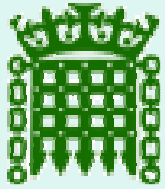


House of Commons Committee Reports

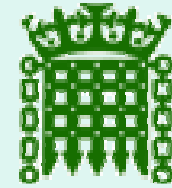
- Urban Public Transport: The Light Rail Option. April 1991
- Light Rapid Transit Systems. May 2000
- Integrated Transport: the Future of Light Rail
and Modern Trams in the United Kingdom. April 2005

APPLRG

- Light Rail & the City Regions Inquiry. February 2010

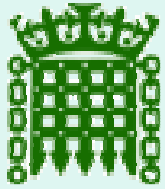


All Party Parliamentary Light Rail Group

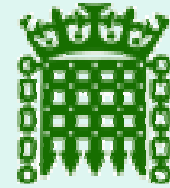


Progress....

- ***Metrolink extensions***
- ***Nottingham extensions***
- ***DLR extensions***
- ***Midland Metro to New Street, and new trams***
- ***Tyne & Wear Metro upgrade (but no extensions)***
- ***Blackpool Tramway upgrade (but no extensions)***
- ***Edinburgh tram under construction***



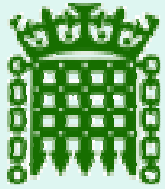
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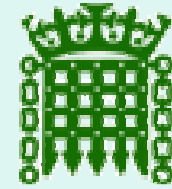
Opportunities....

- ***Tram-trains e.g. Sheffield, Manchester, Teeside***
(Kassel < £2m/km)
- ***Revive cancelled schemes***
e.g. Leeds, Liverpool, Cross River Tram
- ***Support low cost system attempts***
e.g. Preston, York
- ***Encourage lower cost components***
e.g track design, OHLE, hub motors etc

tramway, not scaled down railway



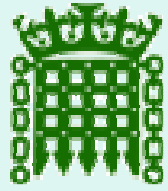
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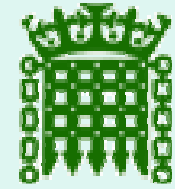
City tramway systems

	France	Spain	USA	UK
Tram systems in operation	16	12	27	6
Tram systems under construction	6	3	3	1
Tram systems planned	4	1	0	0
Tram systems cancelled	0	0	0	6

UK getting left behind !



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Discussion