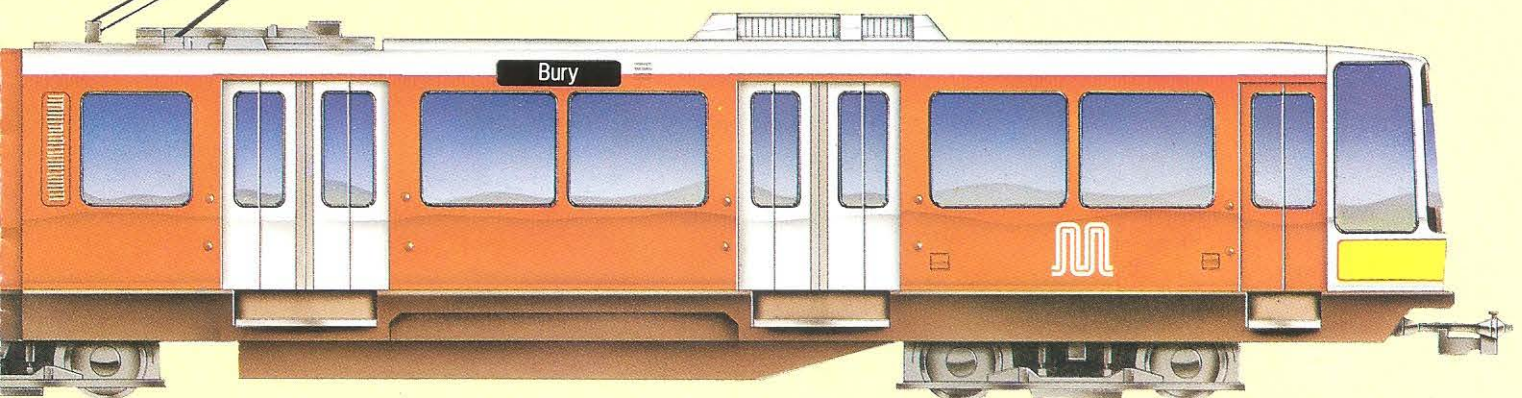




# Light Rapid Transit

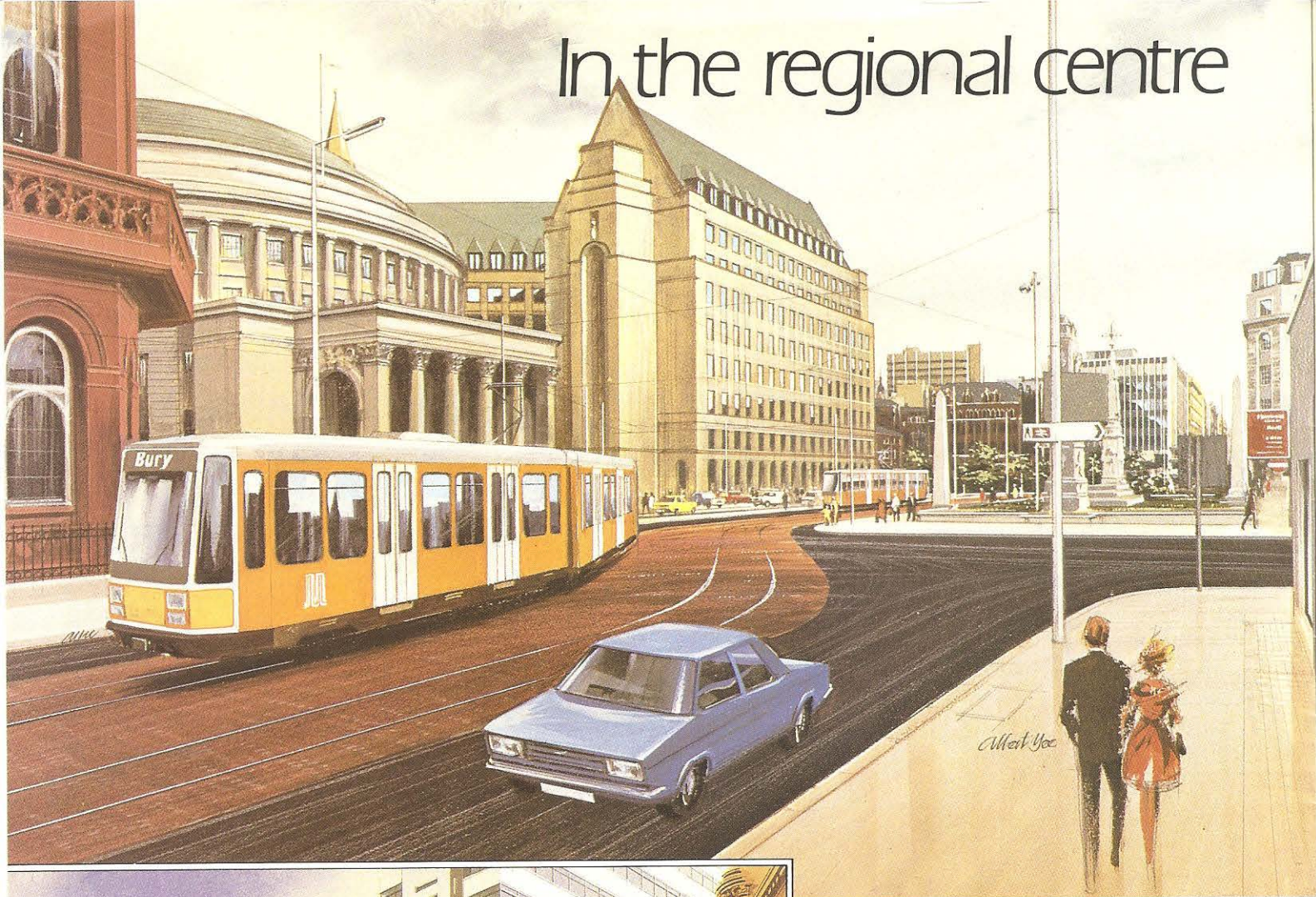


in Greater Manchester...

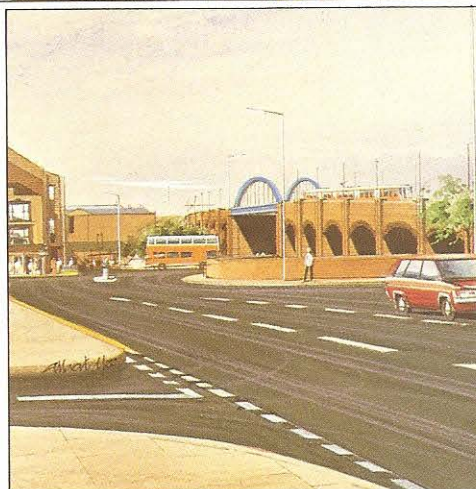
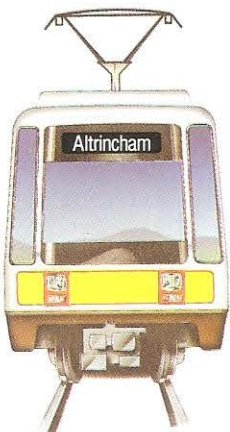




# In the regional centre



Light Rapid Transit will take you right into the heart of the Region's business and commercial centre. Instead of getting off the train at Victoria, Piccadilly or Oxford Road Station to walk or catch a bus to the shops or office, LRT will enable you to continue your journey by rail to Piccadilly Gardens, St. Peter's Square and the Town Hall, the Arndale Shopping Centre, the new G-Mex or many other attractions in the City Centre.





# What is Light Rapid Transit ?

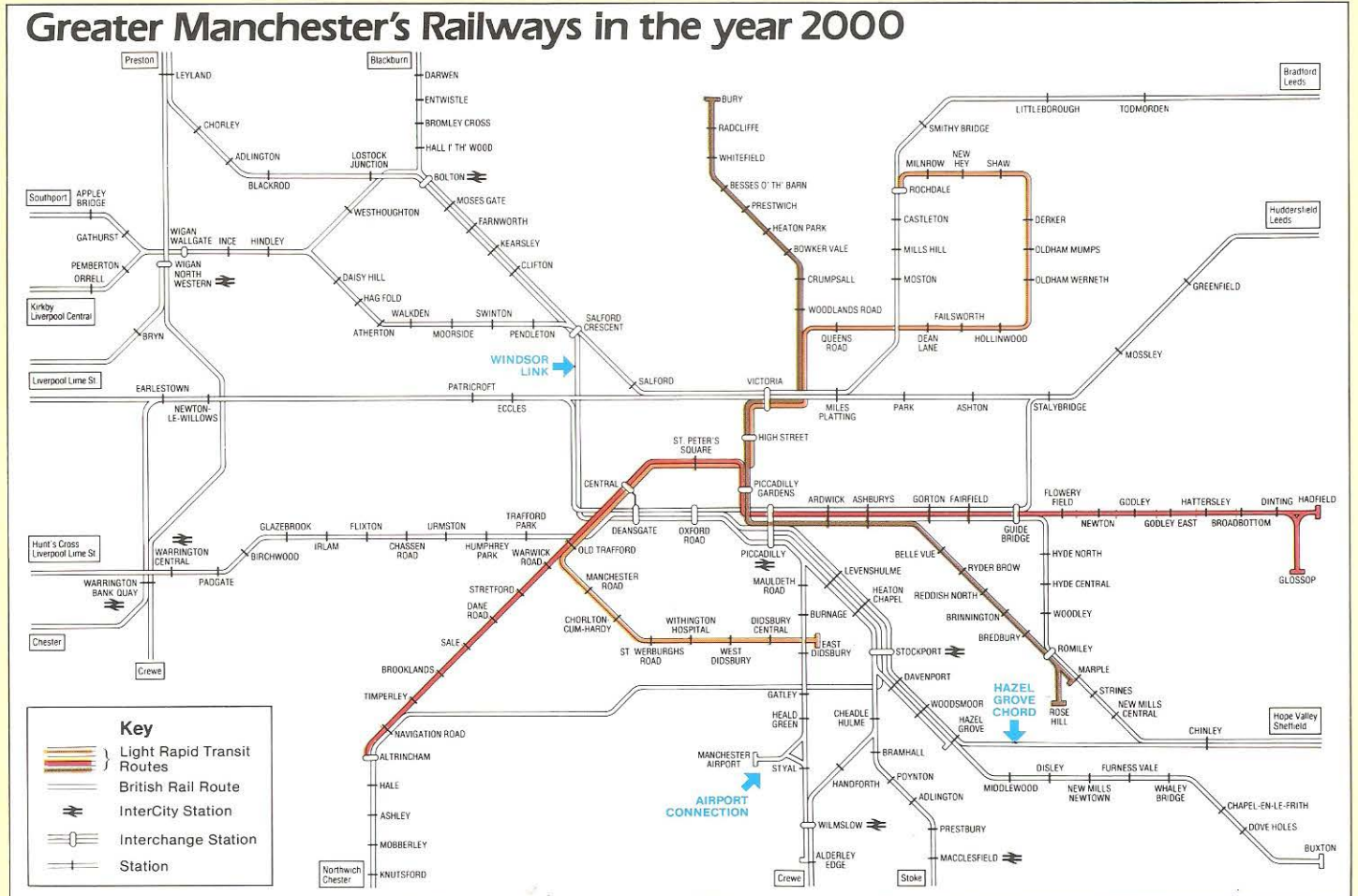
Light Rapid Transit (or LRT for short) is a modern electric railway. Light Rail Vehicles are a cross between a tram and a train. They run at high speed, 50 or 60 mph, on existing railway lines or at normal traffic speeds, up to 30 mph, on city centre streets, separated where possible from other traffic.

After studying different systems, Greater Manchester P.T.E. and British Rail consider that LRT is the most cost effective way of dramatically improving public transport in Greater Manchester. The District Councils and many other bodies agree that LRT is the best way of securing the future of our local rail lines.

The Rail Network Diagram below shows how the LRT system can be built up by converting the existing lines to Bury, Oldham and Rochdale, Guide Bridge and Glossop/Hadfield, Romiley and Marple, and Sale and Altrincham, and reopening the line to Chorlton and Didsbury. New links across the centre between Victoria, Piccadilly and Central Stations complete the Network. Further extensions to, for example, Salford Quays and Rochdale town centre, could be added.

Other British Rail lines will continue, with new or refurbished trains on many of them. The Hazel Grove Chord and Windsor Link, together with the proposed Airport connection will all contribute to a vastly improved network of long distance and local services.

There will be easy interchange between BR and LRT at Piccadilly, Victoria and Deansgate/Central, and at some suburban centres. Most rail journeys in the County could then be made with no more than one change.



To build the whole network may take 5 years or more. To make a start, the First Phase Network will include the Bury and Altrincham lines and the City Centre links.

Greater Manchester P.T.E. has already promoted Bills in Parliament to obtain the necessary powers for the First Phase and has applied to the Government for a grant towards the cost of £47.5 million, including the new Light Rail Vehicles.

The First Phase could be operating by 1990 if approval is given soon. Then work could continue on further phases, with completion of the network in the early nineties.



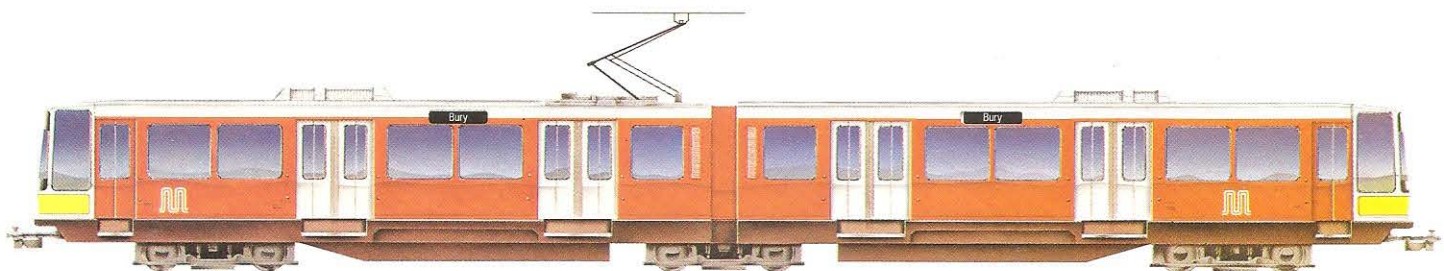
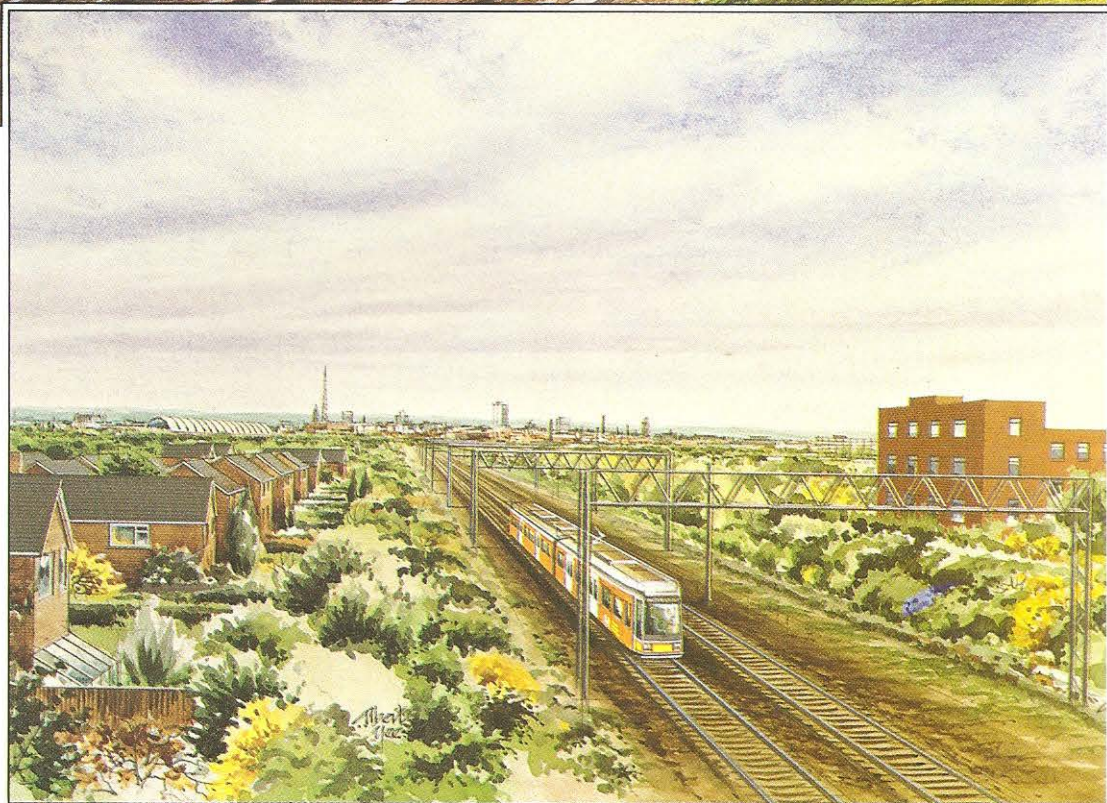


# In the districts



By using existing rail lines, LRT will link existing stations and bus/rail interchanges such as Bury and Altrincham with each other as well as the Regional Centre. Some new stations will be added to make it even easier to get onto the rail network. Some bus services will be changed to take more passengers quickly and conveniently to rail stations.

Whether you want to travel from outer district to inner suburb, into the City Centre, or right across the County, the LRT network will make your journey easier.



New LRV's or 'Supertrams' are articulated double-ended electric cars carrying 180 passengers, running singly or in 2-car trains.



# For the technically minded...

This sheet gives an indication of the technical characteristics of the system as currently proposed. Many design features are yet to be determined, and other modifications or refinements will be made as detailed planning progresses.

## The lines

The proposed LRT network consists of 6 lines, 5 of which are currently operational as suburban lines. They are:-

Manchester (Victoria) – Bury	15.86 km.	(9.86 miles)
Manchester (Victoria) – Oldham - Rochdale	24.11 km.	(14.98 miles)
Manchester (Piccadilly) – Glossop and Hadfield	20.91 km.	(12.99 miles)
Manchester (Piccadilly) – Marple/Rose Hill	16.00 km.	(9.94 miles)
Manchester (Deansgate) – Altrincham	12.33 km.	(7.66 miles)
Manchester (Deansgate) – Chorlton - East Didsbury (local service withdrawn 1967)	10.09 km.	(6.27 miles)

The City Centre links run between Piccadilly, Victoria and Central (Deansgate) Stations using mainly existing streets or short sections of segregated track.

Piccadilly Station - Piccadilly Gardens	0.73 km.	(0.45 miles)
Victoria Station - Piccadilly Gardens	0.80 km.	(0.50 miles)
Central Station - Piccadilly Gardens	1.18 km.	(0.73 miles)
Total Route Length = 96.82 km. (60.51 miles)		

## The vehicles

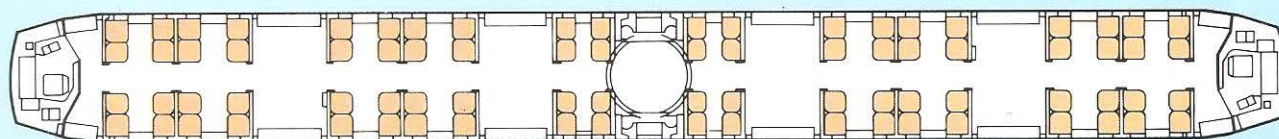
Single articulated (two body) double-ended car on three bogies (6 axles) with automatic couplers for multiple unit operation (normal maximum 2 cars per train), and retractable steps for dual platform height operation (high and low platforms).

General Dimensions:-

Length over couplers	28.00 m.	Maximum speed	80 kph.
Length over body ends	26.90 m.	Maximum acceleration	1.1 m/sec
Width (max.)	2.65 m.	Gradient capability	8%
Height over roof sheet	3.36 m.	Braking rates - normal	1.3 m/sec
Floor height (max.)	1.00 m.	Braking rates - emergency	3.0 m/sec
Bogie centres	10.00 m.	Passenger capacity - seated	80

Characteristics (fully loaded):-

Weight	39 tonnes	Passenger capacity - total	180
Passenger load (peak)	11 tonnes	Overhead Line voltage - street tracks	750 DC
		Overhead Line voltage - railway tracks	1500 DC



## The services

Three basic services are proposed as follows:-

LINE A	Altrincham - Sale - Old Trafford - Central Station - St. Peter's Square - Piccadilly Gardens - Piccadilly Station - Guide Bridge - Hattersley - Glossop and Hadfield.
LINE B	Bury - Whitefield - Victoria Station - Piccadilly Gardens - Piccadilly Station - Romiley - Marple or Rose Hill.
LINE C	Rochdale - Oldham - Victoria Station - Piccadilly Gardens - St. Peter's Square - Central Station - Old Trafford - Chorlton - East Didsbury.

Example running times to Manchester (Piccadilly Gardens) are:-

Altrincham	26 mins.
Old Trafford	10 mins.
East Didsbury	23 mins.
Bury	25 mins.
Whitefield	19 mins.
Oldham	20 mins.
Guide Bridge	15 mins.
Glossop	31 mins.
Hattersley	23 mins.
Romiley	19 mins.
Marple	23 mins.
Rochdale	32 mins.

Each service would operate on a basic frequency of 10 minutes during the day, with additional journeys in weekday peak periods. Frequencies in the evenings and on Sundays, and on the outer sections of some lines may be slightly lower.





Zurich, Switzerland



Los Angeles, U.S.A.



Boston, U.S.A.



Nantes, France

## Other L.R.T. systems

These photographs show some recent examples of new LRT systems. In France, Holland, Germany, the United States, Canada, and many other countries around the world, LRT is demonstrating that public transport in cities can be attractive, efficient and exciting. With Government support, this could also become true in Greater Manchester.

And British manufacturers would welcome a larger home base from which to tackle the expanding overseas market for LRT.



Calgary, Canada



Buffalo, U.S.A.



Tyne & Wear, England



Utrecht, Holland



Bonn, West Germany



Amsterdam, Holland

## The benefits of L.R.T.

- LRT will ... offer overall net financial and economic benefits for the area.
- ... reduce the revenue support needed for local rail services.
- ... improve access to shops and businesses.
- ... encourage development of vacant land, especially for housing.
- ... assist development of leisure, recreation and tourist facilities.
- ... provide better links with British Rail's local and Inter-City networks.
- ... help create jobs in Britain's railway manufacturing industry.



**Greater Manchester Passenger Transport Executive**

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