A Plan of the Overhead Wire Layout for the proposed Leeds Trolley Bus scheme. It is taken from 'The Modern Trolleybus for West Yorkshire Application for a Section 56 Grant' dated November 1985. WYPTE
CHAPTER 104

WYPTE Trolleybus Proposals, 1980-1990

The idea of reintroducing trolley buses into West Yorkshire came in 1980. This type of vehicle had run in Leeds from 1911 to 1928 on two routes: Aire Street to Farnley Moor Top and from Guiseley to Otley and Burley. It had not been very successful. A problem with the Farnley route was the turning arrangements in the city centre. Trolleybuses had run from Aire Street into Wellington Street, Thirsk Row and back to Aire Street. There was no other suitable turning point and there had been frequent deroulements and collisions with railings on the north side of Wellington Street. The service also suffered from competition from the motor buses of the Yorkshire Woollen District Company and latterly from the Corporation’s own bus services. The Guiseley, Otley and Burley routes also had serious competition from private buses and were hopelessly uneconomic.

General Manager, William Chamberlain, had abandoned the trolleybus services, and successive General Managers, R. L. Horsfield, W. Vare Morland and A.B. Findlay were always opposed to the vehicle. In comparison with other cities the centre of Leeds was small and compact with severe congestion. All maintained that the street layout of Leeds was not suited to trolleybuses and that there were turning difficulties.

There was pessimism nationally about the fraught energy situation, rising oil prices and availability. From February 1980 the WYPTE had been looking at ‘alternative traction options’. There were only two fuels available for traction, either diesel or electricity. On 9 October of that year at a meeting of the West Yorkshire Passenger Transport Sub-Committee, the members decided that the Chairman, County Councillor Bill Proom, should attend a meeting of the Electric Vehicle Development Group (EVDG) in London. The meeting was to be held on 11 December when a demonstration of electrically-driven vehicles was planned.

Proom said that regardless of politics the authority should take a lead in such developments because the sources of fuel were going to change and electric propulsion would be used more and more.

“I would like to see the county council playing a leading role by holding a public demonstration on a road to be selected and with the full co-operation of the district councils,” he said.

At the time the EVDG was undertaking projects to develop electric road transport systems, which incorporated battery, hybrid, tracked and dual-mode vehicles. The WYPTE was asked to produce information on a possible demonstration project. It was also to examine all sources of funding for such a demonstration.

After the meeting County Coun. Proom said: “I would like to put on a demonstration in West Yorkshire. I am talking about trolley buses, not trams. I think trams are far too expensive at the moment, but they will have their place in the future because one man can operate a train of trams.”


On 20 February 1981 a special presentation of the system was shown to the Secretary of State for Transport, Norman Fowler, at Brotheron House, Leeds, followed by a Press conference at County Hall, Wakefield, on the 24th.

It was announced that a Bradford route had been chosen for proposed trials of either modern trolleybuses or electric/diesel duo-buses. Duo-buses had both a full power diesel engine and an electric traction motor.

The last trolleybus in Bradford had been withdrawn only nine years earlier in 1972 and much of the infrastructure was still in place. Most of the traction poles to carry the overhead cables were in place, used for street lighting and were to then modern standards. This was thanks to Mike Waller, Assistant Director of Traffic and Transportation for the County Council, a confirmed supporter of
electric traction.
The route selected was the St. Enoch's Road corridor to Wibsey and Buttershaw. It had a five minute frequency and most of the poles were relatively new, trolleybuses only operating from 1955 to 1971. This would give a substantial initial cost saving. There was also a straight steady incline on which trolley buses could operate to advantage.

The objective was to develop electric bus technology in Britain, as an insurance against future oil price rises, disruptions in supply and establish relative operating costs in normal service of the different types of vehicle. The West Yorkshire County Council was to seek financial assistance from the Government and the EEC Commission, to launch the experiment.

Committee chairman, expressed confidence that cash help would come from both sources. The Executive Director of Operations, Bob Davies, said likely costs had been calculated on the basis of running the experiment on three different lengths of route. 2½ miles for about £600,000; 4½ miles £1.1 million and 6½ miles £1.6 million. The PTE was asked to produce more precise estimates of cost. A public showing of the proposals was to be made later in the year.

Design work continued during 1981 and the West Yorkshire County Council spending programme for 1982-3 included a sum of £1,210,000 for an “alternative traction project” experiment for running 21 “mains powered” electric buses on the Wibsey-Bradford-Eccleshill route. It was to be started by November 1983.

Because of its national significance it was considered that the scheme should be funded by a specific grant outside the normal TPP (Transport Policies and Programme) allocation.

There was the hope of money from the EEC Commission and British Government, but in December 1981 both these hopes were dashed. The EEC was to finance similar experimental schemes in Nancy, France and Bologna, Italy, but not in Bradford. West Yorkshire Euro MP, Barry Seal, lodged a complaint with the Brussels Commission to no avail. David Howell, the Transport Secretary, said that it was “not a proper use of national resources at present.” He said that energy prospects in Britain in the near future were not such as to justify the project. Councillor Wayne Jenkins, the new chairman of the now Labour-controlled Passenger Transport Committee remarked:

“We have always regarded this as an experiment of national significance, but we cannot afford to pay for it on our own. The initial cost would be about £250,000 and if no one will give us any money we have no option but to put it on ice.”


The County Council and PTE, however, sought a Parliamentary Act, the West Yorkshire (Parking and Transport) Bill, which gave it authority to run trolley buses as and when money became available. Details of the Bill were published on 27 November 1981. The relevant section of the Bill was to enable the Executive “to operate trolley vehicles and to authorise their operation including the operation of such vehicles for the purposes of testing and demonstrating systems of passenger transport” along several routes within Bradford.

The system proposed covered services from Eccleshill and Greengates travelling into the city by way of Bolton Road, then proceeding across the centre and outwards again via Little Horton Lane and St. Enoch's Road, the route then splitting to go to Wibsey and into the Buttershaw Estate, where two circular routes through the estate were proposed. Apart from British Rail who objected to level crossings, there was no opposition. A significant clause in the Bill was Clause 7 (1) a) and b) which enabled the County Council to build trolley bus routes in ANY part of West Yorkshire without the need for a further application to Parliament.

This was a new departure in Bills and was agreed to by the Government as it did not want to be bothered with small Bills for route extensions etc. However, the Government was later said to be unhappy at giving this blanket coverage and would not be incorporating it in any future bills.

The West Yorkshire (Parking and Transport) Act, 1982, received the Royal Assent on 30 July of that year.

In December 1981 PTE officials visited three countries, France, Germany and Switzerland, to gather information. Their first visit was to Paris where they saw modern trolley buses, heads and overhead equipment made by Delachaux, then to Grenoble, Lyons and Nancy where a new trolley bus and laying new building. Vehicles were adaptations of the modern Renault diesel bus. The party then visited Lausanne and Zurich with a final call at Kaiserslautern in Germany.

Finance was the main problem, the Labour-controlled County Council, the Conservative Government refusing to allocate funds.

In July 1982 a further application was made to the Government to finance the scheme. The trolley bus proposals were a small part (E384,000) of a big £118.7 million claim for transport and highway improvements in the West Yorkshire County Council area. County Councillor Patterson said that the idea of bringing trolley buses back into Bradford was because the PTE needed an alternative strategy to meet forecasted oil restrictions by the end of the century. Money for highway schemes and an increased subsidy for supporting the County’s buses and trains was granted, but the relatively small sum for the initial trolley bus experiments was again thrown out.

Robin Ward, the retiring PTE Director General, in his interview to the press on 25 September 1982, said that the UK should be keeping abreast of trolley bus development, if only as an insurance policy. He very much regretted the Government’s decision not to make funds available for the trolley bus project in West Yorkshire. “I think it is a missed opportunity and hope it will be reversed,” he said.

An approach to the Department of Transport in March 1983 asking why it did not like the idea of trolleybuses also ended in reversion. It did, however, say that it was prepared to consider fresh proposals for trolleybus operation “if it could be shown to be economically justified.”

In July 1983, to supplement the poles on the Buttershaw route, a number of former trolleybus poles were removed in Spaines Road, Birkby, Huddersfield.

Also in 1983 an “Electrifying Urban Public Transport” display was held in Blackpool and a French dubus, a new Renault PER 180, was demonstrated on a short length of overhead wiring erected in Blundell Street.

During the latter part of 1983 PTE officials drew up a dossier of arguments to try to push the trolleybus scheme forward. “Stronger arguments” were put forward and they said the problem was becoming increasingly urgent with soaring fuel costs and the “crippling burden” of maintaining the existing diesel fleet.

Dr. Michael Harrison, strategic planning manager for the WYPTE, said “perhaps we did not make our case clearly enough in 1981. But a great deal of work has gone into preparing our new case.”

In addition to the Bradford proposals, from late 1983 and during 1984 the PTE was also working on plans for a trolleybus system for Leeds. These were thought to be more viable than those for Bradford and could make the Government more interested. The ideas were officially launched on 22 February 1984. The outline scheme was for trolleybuses to operate in Moortown, Roundhay and Middleton on Leeds services. 2, 3, 10, 19, 20 and 21, in a figure of eight arrangement. Each of the six
was to be operated on a basic 15 minute frequency which provided a combined service of 12 buses per hour on the four main radial sections, i.e. Chapeltown Road, Dewsbury Road and Belle Isle Road, with eight and four buses an hour on the outer sections.

A report to the County Council's Public Transport Committee said: "Savings should be of the order of 40% or more compared with average maintenance costs now incurred for diesel buses." Running costs would be about 10% cheaper, the buses would be cleaner, smoother and would break down less often. While the cost of buying a trolleybus was double that of a diesel bus, the report said that the purchase cost would be justified. The trolleybuses were to use a new electronic control system called "chopper control". It was said to reduce current consumption by 25%. This form of control had first appeared in 1968 and used a thyristor as a high speed switch, often called a "chopper". The "chopper" controlled the traction motor by rapidly switching on and off the electrical supply. Regenerative, rheostatic and air braking was to be adopted. There was a problem as there were no manufacturers making the kind of double deck trolley bus that the PTE wanted. It rejected the Continental single deck articulated bus and was to ask British companies to draw up plans for a new double deck trolley bus based on the standard diesel bus used by the PTE.

The report said that the total capital cost of the Bradford scheme was about £2.1 million and the Leeds network about £5.9 million. 35 miles of overhead wiring would be required in Leeds and 12 miles in Bradford. It would make West Yorkshire the first county to reduce the dependence on conventional diesel buses. County Councillor Wayne Jenkins said: "we see the trolleybus scheme taking West Yorkshire into a new transport era. Other countries have already found that they save money and keep fares down." Jenkins continued:

"For too long we have put off spending on our transport system, and we now believe it is the right time to invest in it. We believe trolley buses are the answer to many of our problems.

"We think we can have a system running in three years because what we are doing is not new. We are not taking a technological risk."


71 trolley buses would be needed to replace 78 diesel buses. There would be 52 trolleybuses in Leeds and 19 in Bradford. In Leeds the trolleybuses would be based at Middleton Garage with control from the PTE Headquarters in Swinigate. In Bradford they would be at the Interchange Garage and equipped with small auxiliary diesel generators to allow them to manoeuvre round roadworks, in garages or in the event of a power failure. The County Council predicted that eventually trolleybuses could be operating on 20% of the county's network. It planned to include both the Leeds and Bradford projects in its Transport Policies Programme for 1985-1986.

During 1984 and early 1985 the proposals were developed and studies were made into the costs and passenger benefits of trolleybus operation. However, in the meantime the Government had decided to end Transport Supplementary Grants for public transport schemes. There was also a delay in reintroducing grants under Section 56 of the Transport Act, 1968, in respect of new public transport projects. The PTE said a Section 56 grant application was to be made and it would be 1986-87 before the proposals could be carried out.

From 1982 the PTE had been involved with a European COST Project 303, a study of dual-mode trolleybuses. Dual-mode buses were about £200,000 more expensive, 800kg heavier than a normal trolleybus and 1800kg heavier than a diesel bus. Extensive trials of these vehicles had been made in a number of European countries and in November 1985 a conference was held in Brussels to discuss the results of the experiments. The Project had been a valuable source of information for the PTE on trolleybus developments.
On 12 November 1985 a scheme costing £9.6 million to reintroduce trolley buses, or "ElectroBuses" as they were now termed, to Leeds was revealed by the West Yorkshire County Council. The plan was for 44 new ElectroBuses, in the place of 47 diesel buses, running over 30 miles of route linking Moortown and Middleton through Leeds city centre. The WYPTTE said that they could carry 13.5 million passengers a year in Leeds, five per cent of all bus kilometres in West Yorkshire.

The PTE said it was to ask the Government to give a special Section 66 grant to develop the system. The Government had said that money would only be given to new projects that would pay their way. The PTE said that the Leeds project would "amply meet these requirements," although the previous Bradford plan had been thrown out by the Department of Transport on the grounds that Britain's energy prospects for the coming years did not justify it.

"County Councillor Wayne Jenkins, Chairman of the West Yorkshire Public Transport Committee, said "Modern trolley buses have the benefits of new technology in electronics and microprocessors to help give them a smooth ride, good acceleration and fast hill climbing..."

"...if we get the go-ahead I am convinced jobs will be created in Yorkshire. There is a possibility that bus bodies could be built in Leeds at Optare," County Councillor Jenkins said.


The ElectroBus plan was in three stages, the first being the Leeds service from Moortown and Cottingley to Moortown and Roundhay. The second was to be from Bradford to Cottingley and the third was to link the Leeds and Bradford systems together through Bramley, Stanningley and Thornton. The Bradford-Cottingley and Leeds to Bradford lines would require another 31 buses.

The WYPTTE was to ask the Government to pay £4.8 million, half the cost of Stage 1. It was stated that the other stages would cost £7.7 million, part of which could attract a £3 million grant from the EEC. It was anticipated that work would begin in 1986 and that the first buses would be running by late 1988.

Bill Cottingham, the Director General of the PTE, said: "We are demonstrating to the Government that trolleybuses bring big economic benefits. A study of European trolleybus operators shows that they cost an average 25% less to run than the diesel buses."

Councillor Jenkins said that the buses looked almost identical to diesels from the outside, but underneath they used the latest electronic equipment.

On 13 November 1985 the application was approved by the Public Transport Committee and on the 15th by the WYPTA. The PTA then made its application to the Secretary of State for Transport for a £4.8 million grant. A 72-page document was produced to support the application and there was a leaflet to promote the scheme to the public.

The application showed substantial passenger benefits in the form of speed and comfort, maintenance cost savings, environmental gains and energy savings. It stated that the trolleybuses would feature electronic control with regenerative braking and auxiliary motors for off-road mobility. The overhead network was to total 39 km and incorporate synthetic rope spans and high speed switches. It added that the overhead would be less intrusive and cheaper to maintain than old style equipment. Power was to be supplied by seven compact remotely operated transformers and substations and connected with the Yorkshire Electricity Board's 11 kv AC supply network. The output voltage was to be 750v DC, a common standard for new trolleybuses and light rail systems rather than the 550-600v used on earlier trolleybuses and tramway networks. The combination of 750v, dispersed substations and the use of 107mm² section, grooved profile, overhead wire meant that feeder cables parallel to the overhead line were not required - a substantial saving.

In November 1985 the cost of a diesel bus was about £78,000. A number of manufacturers of electrical equipment, chassis and bodies had supplied estimates to the PTE. These indicated that the cost of a trolleybus to meet the PTE specification would be about £127,000. The life of the vehicle was estimated to be over 30 years compared to 15 years for a motor bus. This was a slight exaggeration for the diesel buses then entering service had a life of around 20 years. A 6% increase in speed was anticipated with trolleybuses.

The capital cost of the Leeds trolleybus network for which a grant was being sought was as follows:

<table>
<thead>
<tr>
<th>Trolleybuses (44)</th>
<th>£5,589,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead 39km</td>
<td>£2,955,000</td>
</tr>
<tr>
<td>Power supply</td>
<td>£144,000</td>
</tr>
<tr>
<td>Tower wagons (2)</td>
<td>£44,000</td>
</tr>
<tr>
<td>Spares</td>
<td>£25,000</td>
</tr>
<tr>
<td>Contingencies</td>
<td>£544,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£9,650,000</strong></td>
</tr>
</tbody>
</table>

A decision on the application was expected in March 1986.

West Yorkshire County Council was not alone in its efforts to reintroduce trolleybuses. In South Yorkshire the council was proposing a £5 million scheme for trolleybuses in Doncaster and Rotherham. It had obtained a Parliamentary Bill on similar lines to the Leeds Bill allowing it to operate trolleybuses anywhere in South Yorkshire. Together with a consortium of South Yorkshire industrialists, it built a mile long test track adjacent to Doncaster Race Course at a cost of £300,000. A trolleybus on a Dennis Dominator chassis carried passengers in the summer of 1985. It was all, however, to no avail.

The Government was not impressed with either scheme, Their success depended on the 50% grants from the Department of Transport.

"A Transport Department spokesman said yesterday: "The attitude is that the Government would not want to become involved in spending a lot of money on new schemes like this just as buses are being deregulated."

"We would want to give them somewhere to settle down and see what the position is then.""


From October the bus licensing system was to be scrapped in favour of a free-for-all allowing anyone to operate buses over any route. The Government had fears that trolleybuses, even though cheap to run, could not survive in such an environment.

The schemes were also blighted in the long term. According to the Department of Transport, the rules covering grants for new projects stipulated that schemes had to show a benefit over a wider area than the places they served. It did not think that transport planners in West and South Yorkshire could demonstrate widespread benefits other than to the bus routes involved. If this was so, both schemes were to fail to qualify for a 50% grant.

In spite of Government disinterest, the new West Yorkshire Passenger Transport Authority, formed on 1 April 1986, following the abolition of West Yorkshire County Council, said it was to continue with the trolleybus plans.

On 7 May 1986 the Government again said it would not provide cash on the ground of pending deregulation, but the new PTA was undaunted.

"Only two weeks after the trolleybus scheme had been turned down, new plans were being formulated by the PTA. On Friday, 30 May, the authority discussed a scheme to get Common Market funding by reshuffling the scheme to make it qualify for cash from the European Regional Development Fund. Bradford qualified for cash
from the fund, but Leeds did not, so the scheme was to be rephased, the Bradford scheme being Phase 1, the link to Leeds via Pudsey was to be stage 2, and the Leeds scheme was to be the last.

The PTA Chairman, Councillor Simmons, said, "We estimate that about 60% of this would qualify for a grant, since any projects must be in Bradford itself or its travel-to-work area." At a meeting on 3 October 1986, the PTA agreed to apply to the EEC for a grant towards the cost of the project. The total cost was said to be £9.15 million and the EEC was to be asked for £5 million. In support of the application a report of 72 pages, very similar to that of November 1985 with the emphasis on Bradford rather than Leeds, was submitted.

The revised plan was for a 23 miles network from the Buttershaw Estate in Bradford, via Thornbury, Pudsey, Stanningley, Farsley, Rodley, Bramley and through to Leeds city centre. There were to be 29 trolleybuses and if the authority got the finance it was to start the first section between Buttershaw and Bradford in 1987 to 1988. The project would be completed in 1990-1. Councillor Simmons said that if the EEC did not approve the grant the scheme would not go ahead before the next General Election. The application received all party support.

Although slightly outside the time period covered by this volume, it was thought apposite to complete the story of the Leeds and Bradford trolleybus saga.

In March 1987 the promotion of a new supertram system in Leeds became a top priority and the trolleybus scheme became less important. In September 1987, although EEC approval had not been received, the scheme was relaunched. On 17 September the PTA announced that tenders were to be invited to build the "electrobuses" and the section of route from Bradford to the sprawling suburb of Buttershaw. Eight trolleybuses were to be provided. The estimated cost was £2 to £3 million and Councillor Simmons, said that work would "definitely start" in Bradford the following year on Britain's first new trolley bus system. Stage 2 from Bradford to Leeds would cost £6.5 million and a third stage was the cross-Leeds route linking Moorpark and Roundhay. Councillor Simmons said that tenders were to be invited nationally to build the buses. He envisaged that they would be built and equipped within West Yorkshire. He said the first stage would be wholly completed within about eighteen months and other stages, depending on finance, in the very early 1990's.

The 'Yorkshire Evening Post' was rather sceptical about the Electrobus scheme. The PTA had said that the trolleybuses would be at least 10% cheaper to run and attract up to 12% more passengers. In a leading article the newspaper said that the PTA did not seem to foresee any possible future increases in the price of electricity and found the forecast of a 12% increase in passengers as "intriguing". It did, however, congratulate the PTA on having the courage to go ahead in the face of Government refusal to back the scheme with cash.

Although funding by the EEC was not forthcoming a surprise announcement by Transport Secretary Paul Channon at the Conservative party conference in October 1988 gave the go ahead for phase 1 of the scheme.

Councillor Simmons said that the PTA was "glad the force of our arguments in favour of trolleybuses has persuaded the Government to approve the proposal as an experiment."

Half the cost of £2 million was to be met by the PTA. The cost of the vehicles was to be borne by the operator selected. Simmons said that allowing for advertising and

A "doctored" 1981 photograph of MCW Metrobus No. 7501 at Seacroft Garage altered to resemble trolley bus No. 9501. According to Dr. Bob Tebb, the "OHM" registration was a "tongue in cheek" hint about the likely resistance to the scheme! WYPTE
As the future operator, Yorkshire Rider arranged with the South Yorkshire PTE to use its Doncaster test track to familiarise staff with trolley bus operation. It borrowed a range of diesel bus versions of proposed trolley buses, the double deck Dennis Dominator with Alexander body, a single deck Volvo B10M with Alexander or Plaxton body and a single deck Renault ER100.2H with a Northern Counties body. All were available as trolleybuses, the Dennis prototype already at Doncaster, the Volvo in several counties and 400 Renault trolleybuses throughout France. Renault had agreed to supply a complete trolleybus for trials, but later withdrew from the bidding, much to the consternation of both the PTA and Yorkshire Rider. Another deterrent was the small number of vehicles initially required. The only firm tender received was from the Surrey-based firm, Dennis Specialist Vehicles, which quoted £285,000 for each vehicle. The high cost was associated with the fact that the company had no previous experience in building trolleybuses and was hedging its bets to ensure it did not bite off more than it could chew.

"It is clear that the company has piled on all its development costs which has added considerably to what we expected the bill to be," were the comments of Bill Cotatham, Yorkshire Rider’s Managing Director.

Possibly of greater concern, however, was the improved performance in two major aspects of new diesel buses then being delivered. These were the double deck Scania N113DRB buses (8001-8042), the first of which was delivered in April 1990. The Scania had a guaranteed lower external noise level (77dBa) and also better acceleration, across virtually the whole speed range, than any trolley bus supplier would quote.

Another disturbing feature was the electrical equipment, which varied considerably between the various manufacturers. There was no agreed standard and no one knew what was in vogue - dc motor, ac motor, switched reluctance motor, coil motor, contactors, choppers, GTO thyristors, power transistors etc. etc. Some of these equipments were unproven and their use involved a high element of risk.

Running and maintenance costs of the vehicles were pure speculation and PTE and Yorkshire Rider estimates varied considerably as shown in the enclosed table prepared in mid-1989.
The proposed Leeds to Bradford trolleybus overhead wire layout. September 1986. WYPTE
Meanwhile, the Government had appreciated this, when it refused to give a grant. Competition had been one of the main reasons for the failure of the original trolleybus system in Leeds.

New trolleybuses were very expensive and had sophisticated control systems, which were costly to maintain.

From the very start of the West Yorkshire trolleybus project one of the principal proponents of the scheme had been Dr. R. G. P. Tebb. Bob Tebb had started with the PTE as its Development Officer at the beginning of February 1980. The very next day he had received a Memorandum from the Operations Director instructing him to look into alternative traction options. From that day he had been closely involved with the ups and downs of the trolleybus proposals including carrying out all the initial evaluations. He had been on the tour of Continental trolleybus systems and was disturbed to be repeatedly told that no one felt trolleybuses were cheaper, or better operationally, than diesel buses.

In an inaugural annual lecture, "The Modern Trolleybus, Phantom or Phoenix", given on 10 March 1992 to Transport Science, Liverpool, he concluded that the trolleybus scheme had failed on three counts:

The economics were bad, the threat of competing bus operators made trolleybus operation decidedly risky and thirdly, the technology had become too complicated, too unproved and too expensive - the passenger would never be able to afford it.

Nothing more was heard of the trolleybus scheme for Leeds and Bradford from the WYPTA, Yorkshire Rider or in the local press. It had been shown on the Continent and America that the super tram could "see off" the motorbus and there was now more interest in light rail and guided buses.

In the first decade of the next century the trolleybus idea was revived. The legal position had changed, allowing a (theoretical) considerable degree of protection against competition. That is another story.

It was immediately realised by the County Council and Yorkshire Rider that the trolleybus was no longer viable. It could only survive in a monopoly situation where it was the sole means of transport. This could be achieved under the old WYPTA system but not under deregulation where anyone could compete with the vehicles. Earlier, the Government had appreciated this, when it refused to give a grant. Competition had been one of the main reasons for the failure of the original trolleybus system in Leeds.

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CHAPTER 105

WYPTE Initial Supertram proposals for Leeds

In November 1976 the first seeds were sown for the possible reintroduction of light rail or tramways in Leeds. In that month the WYPTE had considered proposals for an extensive residential development at Colton, a village to the east of Leeds near to Whitley and Temple Newsam and adjacent to the A63 Leeds and Selby Road. Leeds City Council had purchased the land in 1975. A report was submitted which allowed for the possibility of various public transport facilities to serve the new housing estate. These included a railway reservation, bus priority access and land sufficient to accommodate a twin track light rapid transit system and pedestrian underpasses. This was the first positive proposal to reintroduce light rail into the city following the abandonment of the former tramway system in 1959. It was soon followed by a new version of the "Leeds Approach" to traffic and transport problems.

On 18 February 1977 the Leeds District Passenger Transport Committee considered a report by A.E. Taylor, the West Yorkshire Metropolitan County Council Executive Director of Transportation and Traffic. The report summarised what had been done under the "Leeds Approach" since 1965 and considered the time when oil would cease to be a major source of fuel.

"If the swing is towards electricity, produced from nuclear energy, water power or coal; then in many areas of Leeds the cheapness of electricity is available for an efficient electric transit system. These areas include land in the city suburbs formerly occupied by reserved tracks for the old Leeds tramway system abandoned in 1959."

The County Council and Passenger Transport Executive say in the report that they want to preserve these areas when major new schemes are planned. "In the meantime fixed track systems are being evaluated as part of the ongoing planning process.


The WYPTE report of May 1977 made some interesting proposals for the introduction of a light rapid transit system into Leeds. "Document 316. Light Rail Transit for Leeds. An initial Appraisal" contained 114 pages of text and 29 pages of figures, tables and maps. It did not indicate future policy but was intended as a basis for further investigation into LRT should it be thought worthwhile in the light of the study. There were six chapters:

1. Introduction – background, definition and brief history of LRT.
2. Design features – vehicle types, infrastructure etc.
3. Costs of LRT, etc.
4. Development of LRT networks for Leeds, etc.
5. Evaluation, etc.
6. Summary and Conclusion, etc.

Much of the vehicle and infrastructure data was obtained from the results of previous research carried out by the American Urban Mass Transportation Administration (UMTA) and used the standard American terms: light rail transit (LRT) and light rail vehicle (LRV).

The report discussed the development of tramway systems to LRT standards with reference to Leeds and examined types of vehicles and infrastructure which characterised LRT operation. Comparison was made between seven LRV's in service or being built. It considered that four-axle bogie cars would not be suitable for Leeds. There were line drawings of seven car types. Owing to known financial limitations there was no emphasis on subway running, but on street running - mixed traffic or pedestrian areas, reuse of old or planned tramway reservations and shared railway running.

The following costs (at mid-1975 price levels) were indicated:

- a) Street running with low or no platforms with similar costs for centre or side of road reservations.
  £300,000 per km.

- b) Elevated route with stations and escalators.
  £2,200,000 per km.

- c) Cut and cover construction with simple stations and escalators.
  £3,500,000 per km.

- d) Use of former railway formation in good condition with low level platforms.
  £120,000 per km.

Vehicle costs at 1975 levels were stated to be:

- Tatra K2, £65,000; Duewag (standard) £200,000;
- Duewag (Stadtbahnwagen P8 etc) £250,000 and Tyne
  and Wear Metro car £260,000.

Maintenance costs (including track and overhead) were estimated to be 1.5 times greater than for motor buses.

Perhaps the most interesting chapter was Chapter 4 which discussed possible tramway networks for Leeds.

Network A covered six major routes: York Road with an estimated peak hour loading of 5,000 passengers; Stanmore, 2000; Harehills, 3,000; Moortown 2,000; Headingly 4,000; and Belle Isle 2,000. Various branches were suggested including Seacroft, Colton, Cookridge and Roundhay. The routes were to use existing reservations and median strips where available, and street running with various road modifications particularly through Headingly. Underpasses were proposed at the Woodpecker junction on the York Road line, Hyde Park Corner, Headingly and

at Hunslet on the Belle Isle route. In the city centre two west/east routes were considered: Wellington Street-City Square-Boar Lane-Duncan Street-Corn Exchange-Call Lane and Westgate-The Headrow-Eastgate. North/south routes could use Briggate – two way LRT only, or Vicar Lane south of and Briggate northwards.

Network B was an attempt to develop a minimum LRT system of high quality, largely segregated rights of way serving the York Road and Stanningley areas. The line was to run from The Headrow with a bridge over the Eastgate roundabout, cross the Quarry Hill site with a bridge over Marsh Lane into Marsh Lane Goods Yard and picking up the northernmost pair of the five tracks of the BR line in Upper Accommodation Road tunnel. To avoid the Devil's Arches in this section the line was to turn north through East End Park and across Osmondthorpe Lane and through playing fields and join the BR tracks to Cross Gates. It would then branch northwards along the former BR Wetherby line to a terminus at Stanks. There were to be two branches one from Halton Dial and along the former Halton Hill tramway reservation to Colton. Another branch was to be from Wyke Beck to Seacroft. There were other possible extensions to Garforth and Whinmoor.

On the Stanningley side, from The Headrow the route was to cross the former Wellington Street Goods Yard to join the existing City Station-Bradford railway line through a new Pudsey. The existing diesel railcars would be replaced by LRV's.

In evaluating the proposals Network A was stated to be 57 km in length of which 19.5 km was street running. Network B was 26 km long with 1.4km of street running. Network A would require 99 LRV's (114 with spare vehicles) to replace about 260 buses. Network B required 31 LRV's (36 with spare vehicles) to replace 115 buses. Service intervals on Network A at peaks would be Headingley (from two branches) 2 minutes; Stanningley 4 minutes; Moortown (from two branches) 3-75 minutes; Harehills (from two branches) 2-5 minutes, York Road (from three branches) 1-67 minutes and Belle Isle 4 minutes. Peak services for Network B were based on five minute headways on the three York Road branches and a five minute headway on the New Pudsey line. Probably running through from Stanks.

Summarising, the report stated in relation to Leeds:

On balance it may be concluded that the introduction of either Network A or B would lead to overall benefits to public transport users. In those corridors in Network A that consist of street tramway, however, the benefits to public transport passengers are unlikely to be large and may be offset by the increased delays to other traffic and losses of traffic capacity.

The Study Team's view is that while, on the basis of the available evidence, Network B appears promising, it was unlikely to feature in a Recommended Plan for 1981 on account of its high cost in relation to available funds. However, if additional funds were to become available, possibly in the period after 1981, LRT might be worth of consideration. Certainly on the basis of work to date and the world wide resurgence of interest in the mode, it would be unwise to rule out LRT for all time purely on the basis of the current lack of funds."


The WYTrConsult report bore some fruit for, on 26 May 1978 at a meeting of the County Council's Leeds area committee, a scheme for an interchange at the Sheeepscar junction was proposed. It was designed to "incorporate all future light rail options." The County Council report said that a route to the north of Leeds, via Sheeepscar, would in terms of capital cost and patronage be as attractive as the proposed light rail route to the south of the city.

On 7 September 1978 at a meeting of the County Council's Transport Committee discussions took place in regard to safeguarding possible routes through the business centre to the east of the city. County Councillor John Tweddle said that the county council had been examining the possibility of using new transport technologies to solve problems of passenger transport, perhaps by using a modernised tramway. "It is now necessary to identify key sites where the county should seek to safeguard, by agreement, a corridor through central Leeds."

While the system would probably not come into operation before 1991, the safe-guarded routes could be used until then to provide a conventional bus service to meet the growing transport needs of the business centre. Light rail transit in Leeds would need an investment of approximately £30 million in the first instance.

If the financial climate improves or if the Government is prepared to invest in the level of funding recently spent on the Tyne and Wear Metro in other counties, West Yorkshire will be in a position to take up the offer and provide a new transport system for the future."

'Evening Post', 7 September 1978. On 19 September 1978 Leeds City Council unveiled its plan for the redevelopment of Colton. In a 62-page report a large housing estate of 2,500 houses was planned, 80% privately owned and 20% council houses. Alongside the estate, distributor road, from the Austerhope roundabout at the junction with the Ring Road, was a reservation for future light rail transit. The proposed terminus was near to Bullerthorpe Lane.

In February 1979, a recently formed transport pressure group, Transport 2000, said that tramway plans for Leeds should be speeded up because of future energy prospects. It said that the PTA should give priority to the system. It felt that the County Council was now on the "right track" with its transport policies, although it still had some way to go. "Originally the council was preoccupied with highway construction, but recently it has begun to take more interest in public transport," the group said.

A report published by the PTE in May 1979 hinted at the possible reintroduction of electric trams into the city. "It is recognised that the apparently once obsolete tram has matured technologically in recent years into an advanced vehicle offering very smooth and quiet transport with high acceleration and speed and very high passenger capacity."


It suggested that a feasibility study be carried out in conjunction with West Yorkshire County Council. An Electric Vehicle Development Group had been instituted to conduct experiments and set up demonstrations of railed, trolley and battery operated electric vehicles. In October 1980 Councillor Bill Proom, the then Chairman of the Passenger Transport Sub-Committee, said that regardless of politics, he thought that the PTE should take a lead in experimenting with this type of transport.

Transport 2000 thought that the existing railway along the York Road corridor was adequate to serve current needs subject to certain stations being reopened. It recommended that LRT be used to Roundhay, Alwoodley, Seacroft via Harehills and to Middleton and Rothwell.

In 1976 transport officials had suggested the introduction of trams to the Socialist administration of the time and the Conservatives supported the idea. However, Alderman Bertrand Mathier, a Conservative who had opposed the abandonment of the original trams in the 1950's, was sceptical and did not think that the Council would have the "guts" to take the proposals beyond the talking stage. The incoming Socialist administration of 1981 was more interested in the day-to-day problem of making the existing bus system more viable. During the remaining WYPTE period nothing more was done and the tramway proposals were put on the back burner. They were revived in earnest in 1988 and an application to Parliament was later made. This, however, is outside the period covered by this volume and is part of another interesting story.
ElectroLine services would operate on rails, sometimes in the road but more often segregated to give a faster service. The vehicles would be of the long single deck articulated design often found providing high quality public transport services in European and American cities. Light rail systems came to Britain with the Tyne and Wear Metro, which is being followed by the London Docklands Light Railway now under construction. Inevitably, the higher capital cost of ElectroLine makes it the longer term partner to ElectroBus. Together they offer a high quality transport service with lower operating costs and major environmental benefits for the public of West Yorkshire.

West Yorkshire's public transport for the future.

ElectroBus + ElectroLine

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A proposed Super Tram system for Leeds was suggested in this publicity material published by the WYPTE in August 1985. WYPTE