UNDERGROUND NEWS

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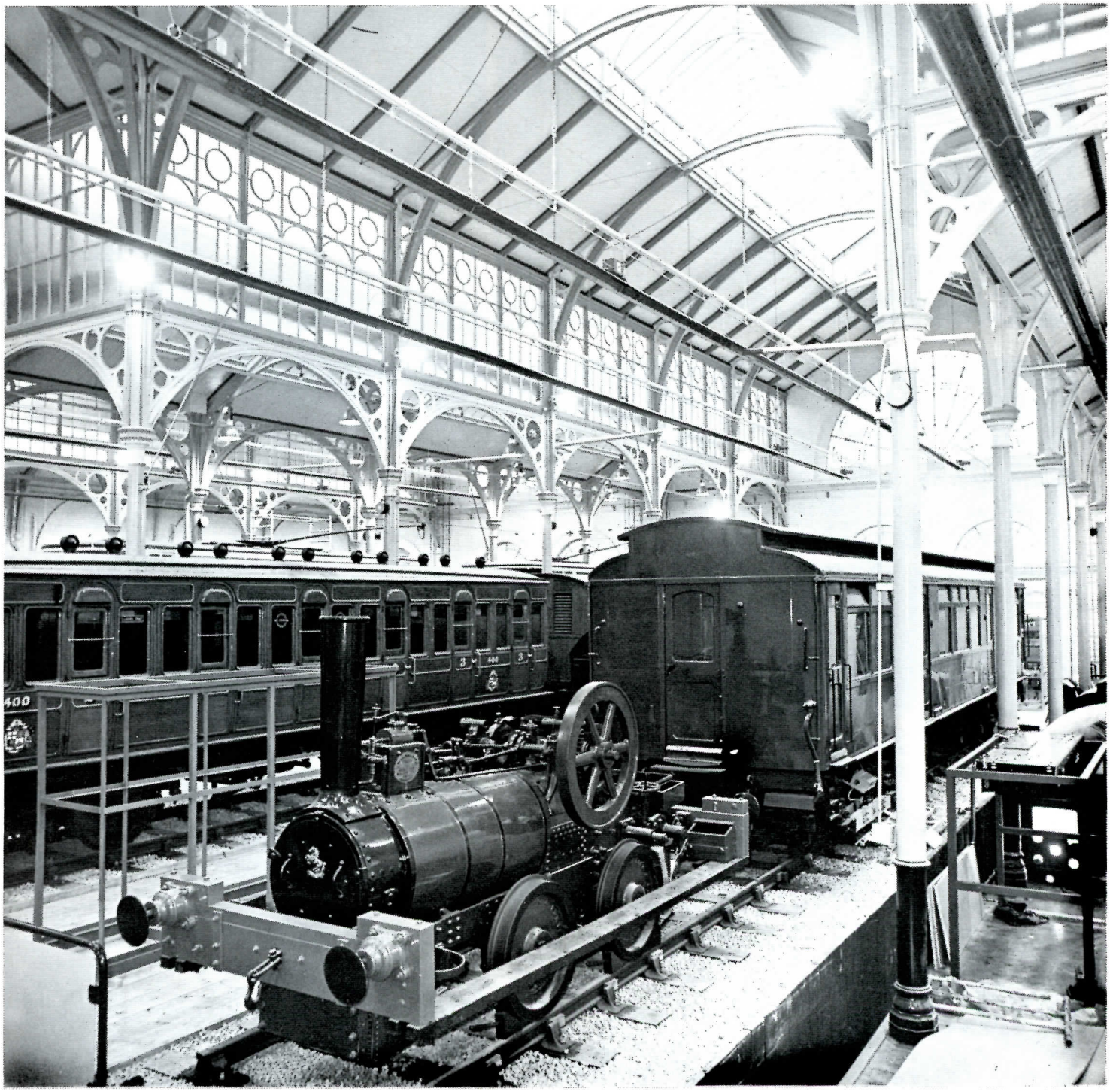
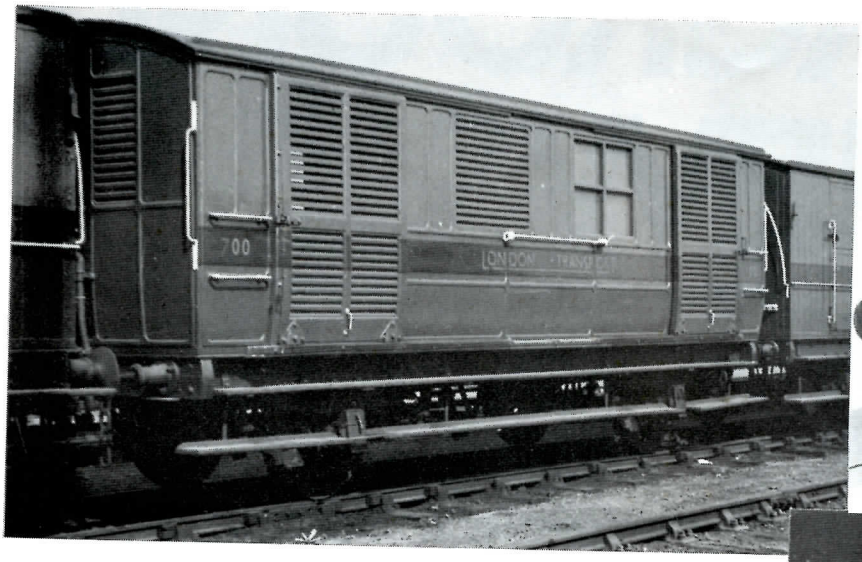
THE L. T. MUSEUM

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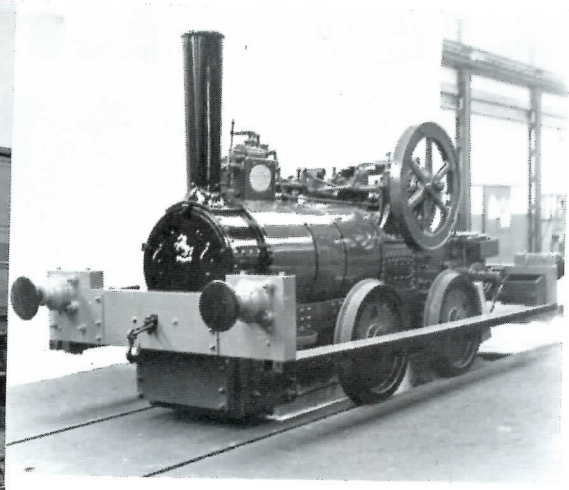


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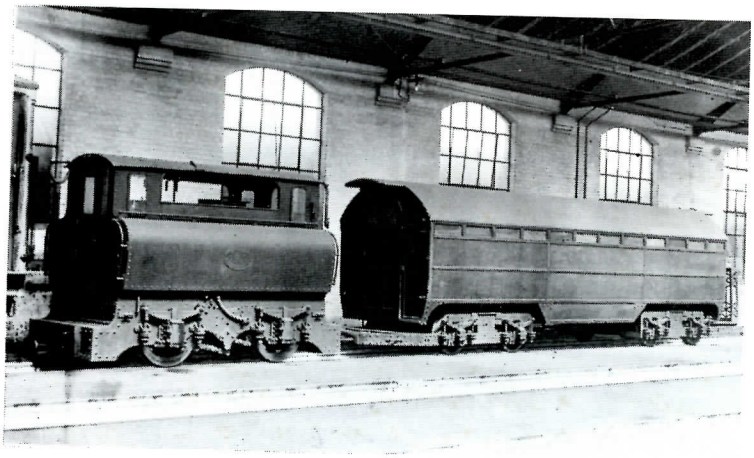


METROPOLITAN & DISTRICT
RAILWAYS
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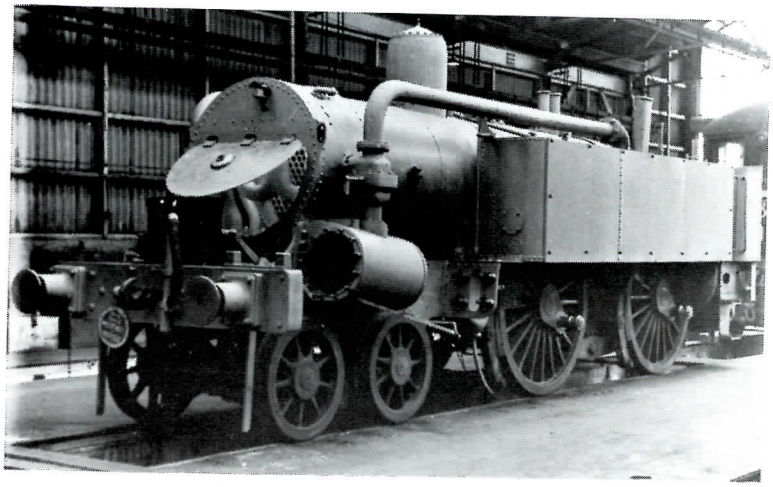
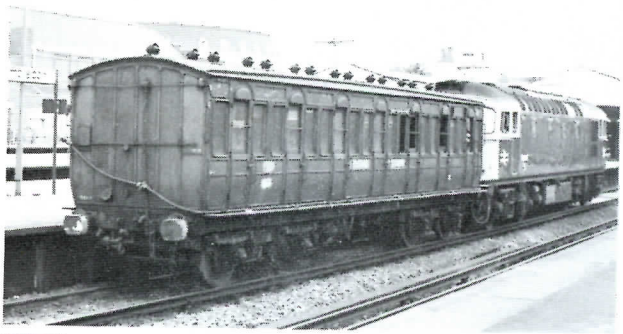
STATION
DISTRICT &
CIRCLE LINES
UNDERGROUND



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MUSEUM IN THE MARKET

On 28th March 1980 the London Transport Museum was formally opened by Her Royal Highness Princess Anne. On the following day the museum first opened its doors to the public and London saw the arrival of the first Museum which is devoted entirely to the history of transport development in the capital. The opening ceremony marked the culmination of over two years hard work by Mr. Peter Stephens and his staff. This work has involved the finding of a suitable site for the museum, transferring of exhibits from their various previous locations, financing the project, preparing the building in which the museum was to be housed and thousands of administrative tasks associated with the project. As a result of all this work, London now has a new museum in a central position, which should increase its chances of being a potential tourist attraction, and which will provide the public with a record of their capital's transport system history unparalleled in the world.

The title "Museum in the Market" has been coined because of the location of the building in the former Flower Market at Covent Garden. The museum project is part of a scheme to revitalise a part of London whose character has changed since the removal of the former Vegetable and Flower Markets of Covent Garden to their new site at Nine Elms. Support from local residents and other associations has helped the project as it is believed that the museum's location will help the area to attract small buisnesses and services to the area and build a new community.

One of the main considerations in the setting up of the new museum has been the wish that it should not merely be a display of historic vehicles and railway cars, but that it should be a museum in the fullest sense of the word. This means that this should be able to present to the visitor the story of transport development in London in all areas. The displays have been carefully chosen to this end, and the exhibits are arranged so that if a particular route is followed around the museum the story of London's transport is seen in chronological order. A beautifully produced museum guide is available which shows a suggested route to enable this to be done.

FRONT COVER: General view of some of the rail exhibits in the new museum showing Met. Rly. 'Ashbury' coach No. 400 (left), Brill Branch loco. (foreground), Q23 car No. 4248 (right) and 1938 Tube Stock cab and frame-mounted P.C.M. unit (extreme right). The picture also shows the vaulted glass roof and cast iron work of the Flower Market.(LTE)

TOP LEFT: The Met. Rly. milk van in use as breakdown vehicle 700.(H.Luff)

TOP RIGHT: The Brill Branch Loco. newly restored at Neasden 19.1.57.(LURS)

UPPER LEFT: C&SLR loco 36 and 'padded cell' car in store at Lillie Bridge before World War 2. Loco. 36 was displayed at Moorgate but damaged by enemy action and finally scrapped. (Len's of Sutton)

UPPER RIGHT: The decorative ironwork above the entrance to High Street Kensington Station in May 1972. This and its supports are now in the museum between the main building and the covered way. (Photo taken from inside and printed back to front) (R. J. Greenaway)

MIDDLE RIGHT: Exterior view of High Street Ken. ironwork.(R.J.Greenaway)

LOWER LEFT: L.45 undergoing restoration at Neasden 13.8.60, prior to its reappearance as Metropolitan Railway No. 23. (H. Clarke/L.U.R.S.)

LOWER RIGHT: 'Ashbury' coach 400 still in L.T. livery and numbered 519 at Wimbledon with B.R. loco. 33 007 on 22.7.76 when it returned to L.T. from Brighton. Immediately after withdrawal, 519 was stored with other relics at Clay Cross in Derbyshire, but was subsequently transferred to the former Pullman works at Preston Park, Brighton. (R.J.G.)

BOTTOM LEFT:'Met.' electric loco. No. 5 "John Hampden" with a train of steam stock at Neasden on 13.5.61. (H. Clarke/L.U.R.S. Collection)

BOTTOM RIGHT: Q23 4248 at Ealing Broadway on 22.2.72 being transferred between 2 pairs of Q38 pilot motor cars from Ealing Common to Ruislip for preservation. (R. J. Greenaway)

The Flower Market

The history of the Covent Garden Market goes back to the middle ages. During that era the area was known as the Convent Garden as it was owned by the Abbots of Westminster and it was here that they sold their produce to the citizens of London. Eventually the ownership of the site passed to the Earl of Bedford and the area became established as a proper market with building development. The right to hold a market in the area, and to charge tolls, was contained in a charter granted by Charles II in 1670 to William, Earl of Bedford. By the early 19th century, the arrangements for the display and sale of produce had become extremely unsatisfactory. London's population was increasing rapidly, and by the 1820's the need for improvements to the overloaded and insanitary conditions became so pressing that the proprietor of the Market, the Duke of Bedford, procured an Act of Parliament confirming the Charter and granting the right to rebuild the Market. Several proposals were put forward, but the plans drawn up by Charles Fowler in 1827 won such general approval that the Duke of Bedford apponited him architect for the scheme.

A further scheme for rebuilding was begun in 1871, and this scheme included a new building for the Flower Market. A new building was erected on the site of the old one to the designs of one William Rogers, who was an architect in the employ of the contractors for the work, William Cubitt & Co. The cost of the building was £17710..

As built, the Flower Market is an extensive structure of cast iron arcades with glazed clerestories supporting slated roofs and skylights, planned in the form of two wide and tall naves running north to south between three aisles. The Tavistock Street frontage is a bold and effective design, with a mixture of Victorian Renaissance and Roman designs carried out in red brick with stone dressings. The nave and aisle divisions are marked by pilasters between which are spaced seven arched openings. The Wellington Street front is finished in stone and white brick with panelled and bracketed entablature and an open balustrade.

Whilst it may be regarded essential that a museum should have a representative and relevant collection of exhibits attractively displayed to attract visitors, if an added attraction in the form of a building which has either been specially built as a modern museum, or has some significant historical or archetural interest, can be provided, this must be an advantage. This is the case with the London Transport Museum, which has the unusual and attractive distinction of being housed in a building such as the Flower Market. It not only has an interesting location but it is , in itself, an unusual building as far as its architecture is concerned. Its retention as a museum building has helped to preserve the character of the locality, as was the wish of the local residents and, eventually, of the planners as well.

In addition to the Flower Market main building itself, the covered way next to the building has also been taken over as part of the new museum. This is a smaller structure, but is valuable in providing a site for the heavier exhibits which could not be placed in the main building because of the design of the flooring and the existence of a celler beneath it. It also has the advantage of a large entrance which allowed easier access for the exhibits installation. The covered way is separated from the main building by a series of archways, some of which have been retained as a means of entry and exit between the two parts of the museum.

Restoration of the Flower Market

In July 1975 an advertisment appeared in the press from the GLC for a tenant for the Flower Market at Covent Garden. After the receipt of over 100 applications, London Transport was accepted as the new tenant who would use the building for its museum project. The building was taken over by LT in 1977, but by that time it had been empty and unused, apart from the occasional beer festival, for several years. Many of the flower stalls remained in the building, but apart form these it was generally empty and dirty, the roof was leaking in several places where the roof covering had failed and there were signs of extensive damage to the roof boarding itself. It was evident that a considerable amount of restoration work would be needed on the building itself and that floor strengthening would be required to enable the installation of the heavier exhibits without the risk of the floor collapsing into the cellar beneath. As the cellar was to be let with the intention of converting it into a theatre museum London Transport's tenancy did not extend to this area. It was therefore essential that the strengthening work should leave this area as free as possible.

The original flower market is a listed building and therefore nothing could be done to alter the original structure, also the position of the cast iron support columns presented difficulties when preparing designs for the layout of the exhibits. It was therefore decided to use the covered way adjacent to the main building as part of the museum. This also required restoration but the task was somewhat easier as it was not listed and is not of the same quality as the main building. J.A. Elliott Limited were awarded two contracts for the restoration of the building and for the subsequent fitting out and installation of the museum exhibits.

The restoration work began in January 1978 and involved stripping out the existing flower stalls and services. The latter formed a network of wire suspensions about twenty feet above floor level. Included in these were some old gas barrel piping for the original lights and which were heavily moulded and turned brass units. These were carefully saved for incorporation in the restoration of the main market building nextdoor. The interior of the flower market was then completely filled with scaffolding to provide a working platform for all the under surfaces of the roof. Much of the low level roofing had to be removed so that the scaffolding could be extended through to give access to the clerestorey and high level roofs outside. The glazing was all stripped out and an inspection of the basic structure took place. It was found to be basically sound but there was an area of severe structural damage at the end of the building believed to have been caused by a bomb dropped by a Zeppelin during the first world war. Guttering and areas of corrosion had to be repaired and it was necessary to use a water-borne blasting system to clean down the corroded areas and exposed ironwork.. Many of the window framings had to be dismantled and re-assembled because of deformation. Once the high level roofs were weather tight and the lanterns reglazed the scaffolding was lowered to allow glazing of the clerestorey followed by repair of the low level roofs.

The external wall areas facing Covent Garden and Tavistock Street had to have their upper areas saturated with water and then brushed down and the stucco work repainted. The Wellington Street annexe elevation had some stone brickwork which had to be dry blasted and repaired using tinted mortar. When that work had all been completed and painting was being carried out it was necessary to provide special heating facilities as the weather was very cold at this time and there was difficulty in getting the paint to flow properly.

Part of the first contract also involved the erection of a steel framed table designed to carry the larger exhibits. The original floor was quite unsuitable for this purpose as it consisted of iron filler joists with a rubble infill. The new table is a steel frame between three and five feet above the original floor level, supported on concrete pads in the basement beneath. These bases were very difficult to construct, not only because of the restricted access to the basement, but because every position chosen as a base seemed to co-incide with the site of an old well.

The lighting was installed by London Transport's own lighting engineers and was specially designed so that the conduit necessary was as unobtrusive as possible so as not to spoil the existing fabric of the building. Most of the work was completed by March 1979 and, immediately afterwards, the second contract was started.

The second contract involved the erection of a small building within the Wellington Street annexe on one side of the building, restoration and finishing of the covered way and installation and finishing of the sites for the rail and tram exibits. The floor of the buildings had to be asphalted and those of the raised platform finished in timber. Ramps have been fitted to allow access by the disabled etc.

The building in the Wellington Street annexe has had its first floor finished out as offices for the museum and its ground floor as a tea bar, toilets and a lecture hall. A separate building nearby has been reserved as a library.

The Installation of Exhibits

One of the more difficult tasks facing the museum project has been the installation of the large exhibits. Most of these were housed at the Syon Park garden centre as the London Transport Collection. The work of removing them by road and installing them at Covent Garden was undertaken by a team comprising Messrs. Sunters of Northallerton and London Transport's breakdown engineers. Most of the moves had to be done at night and involved the co-operation of the police and some road closures. The job was made all the more difficult because the entrance of the building could not be altered to accept the larger vehicles more easily because of the fact that the building is listed. The moves of the railway vehicles were as follows:

15.5.79 Chesham Shuttle Coach, Ruislip to Covent Garden
16.5.79 Brill loco, Syon Park to Covent Garden
19.5.79 Q23 Stock car, Syon Park to Covent Garden
23.5.79 C & SLR Car, Syon Park to Covent Garden
24.5.79 Met. Rly. Milk Van, Syon Park to Covent Garden
26.7.79 C & SLR 4-wheel wagon, London Road Depot to Syon Park
14.8.79 Cab of 1938 Stock Motor Car 11149, Neasden to Covent Garden
15.8.79 Rear End of Gate Stock car, Syon Park to Covent Garden
15.9.79 1938 Stock Motor Car 11182, Ruislip to Covent Garden
22.9.79 Met. Rly. Electric Loco No 5, Syon Park to Covent Garden
25.9.79 Met. Rly. Steam Loco No 23, Syon Park to Covent Garden

The movement of the large rail exhibits from the low loader in the street to their position inside the museum building was carried out using specially laid rail tracks laid on stacks of sleepers from the road way to the rail track installed in the museum. The most difficult move was with the Q23 motor car No 4248 which had to be turned through 90 degrees between the cast iron columns of the building with only inches to spare.

Preservation on London Transport

It was not until the 1920's that any attempt was made to foster an interest in the public mind for the history of transport in London. In 1928 a special exhibition was mounted at South Kensington Station to celebrate the Diamond Jubilee of the District Railway. Included in the exhibits was an old 4-wheeled coach of the type used on the steam operated services of the District and a steam locomotive. In the same year another exhibition of tube railway vehicles included a City & South London locomotive and car of the type that the line had used up to the time of its conversion to full tube line standards in 1924. When the C & SLR had been closed one of its locomotives was presented to the Science Museum where it is still on display. The car is now part of the present London Transport Museum.

The following year, 1929, saw the centenary of the first omnibus service begun by George Shillibeer. The London General Omnibus Company had a replica of Shillibeer's horse bus specially constructed at the company's works at Chiswick. It was shown at the centenary celebrations and was the first of a series of vehicles which the LGOC and London Transport kept at Chiswick.

By the mid-1950's there was a good collection of preserved buses at Chiswick but there was no suitable location for their permanant display to the public. The C & SLR car was on display in the York Railway Museum originally set up by the LNER and the same line's locomotive was in the Science Museum. A second loco of a similar type had been on display at Moorgate Station but had been so badly damaged during an air raid that it had to be dismantled. Only the motors were saved and went to Cromptons of Colchester, the original makers. Fortunately, London Transport's policy of keeping old passenger vehicles as service locomotives meant that, in the event of a museum being set up, there would still be plenty of examples of old rolling stock available for exhibition. Unfortunately, although a number of cars were thought of as being suitable for preservation, the lack of space on LT or of a suitable museum prepared to take them, meant that many of them were broken up .

In those days, of course, the idea of transport museums and general interest in transport history was not as popular as today. After all, much of the rolling stock running on the main line railways was so old, or at least so badly looked after, that the public was actually paying for the priviledge of riding on a working museum. The good Doctor Beeching saw to the end of all that and immediately produced an upsurge of interest in the preservation of steam locomotives in particular, but also of interest in transport history in general. In London, interest in the capital's transport history was given a boost by the centenary celebrations for the Metropolitan Railway held at Neasden in 1963. In that year too, the large exhibits section of the British Transport Museum was opened. Many road and rail vehicles of London Transport origin were shown there, together with the main line rail exhibits.

Under the provisions of the 1968 Transport Act all the BR museums were to be closed and the vehicles in them were to be offered back to their original owners, except for the main line railway items, which were handed over to the Department of Education and Science with the intention of setting up a National Railway Museum. This was successfully done at York. The 1968 Act allowed owners to recover their vehicles from the BR museums but, although they were legally bound to preserve them, there was no obligation to display them. However, London Transport was fortunate in being to obtain an agreement with the Syon Park Gardening Centre which allowed them a seven year lease on a building in which their historical relics could be displayed to the public. Although the collection was now housed in a pleasant setting, the building was restricted in size and was not ideal for the permanent

exhibition because of temperature control problems. However, there was the opportunity for Open Days and Gala Days which attracted large numbers of transport buffs. Perhaps due to the poor transport access, the expected attendance levels did not materialise, but nevertheless, some thought was given to extending the building to take some more large exhibits which were becoming available for preservation with the replacement of older road and rail vehicles in service. At this time however, the chance to move to the more central site at Covent Garden came up and a real chance to provide London with a proper Museum, complete with facilities for education and research.

The Museum Philosophy

It is quite obvious that the stated intention of the Museum to provide a comprehensive survey of the story of transport in London over the last 200 years has been behind the way in which the exhibits and displays are arranged, It is also clear that this intention has succeeded. Those representatives of this Society who have kindly been afforded facilities to view the Museum prior to the public opening have all been impressed with the way in which the subjects have been arranged. There is no doubt that much can be learned from a visit to the Museum and it will certainly become one of those places which are on the list of every school visits organiser.

The scheme to present the history of London's transport as a general theme for the visitor can be seen in the display panels arranged around the walls. These cover various subjects by means of photographs, reproductions of prints and descriptive passages. The subjects include tube railway engineering, sub-surface railway development, rolling stock development, architecture, fare collection, general transport history, LT at War and general history on road and river transport. A great deal of time can be spent on just looking at these displays and, if the route shown in the Museum guide is followed, the history of London's transport can be followed in roughly date order. Some interesting photographs appear on the panels, apart from those well known to the student of London Transport history, and there are some prints of early subjects which have not been seen before.

Another feature of the Museum is the attempt to show the influence that the development of the transport system has had socially. The growth of the suburbs as a result of electric railway expansion - Metroland for example - is shown. Many of the posters which advertised London Transport and its predecessors are on display and show many of the fine examples of the work of the best commercial artists of the past. The theme of art is also present in a display of pictures by the artist Edna Lumb. She was granted facilities to observe the restoration of the building and the transfer of the main exhibits from Syon Park so that she could produce a series of paintings showing the setting up of the museum. She has produced a very fine collection which is on display near the tea bar. In the same area there is another display of the detailed and colourful oil paintings produced by our own Society member Malcolm Drabwell. The use of the museum to show transport subjects produced by artists is another example of the intention to present an overall theme.

The displays in the museum are not solely related to the historical. There are a number of working models and full size examples of transport technology which serve to show how some of the important features of transport operation are actually carried out. One of these is a signalling display, which shows

the operation of the standard miniature lever frame as used in signal cabins all over the Underground system for many years. There is also a full size set of points and a point machine in full working order, complete with signals, which can be operated by a pair of push buttons. Examples of early signal relays are on display, and an interlocking machine room with working route setting and a recorded description of the sequence of operation can be started by the visitor using a push button. There is also a hand operated model which shows the operation of the simple track circuit which provides the safe operation of automatic signals.

Lifts and Escalators are not forgotten either. There are models of the early "shunt" type and the later standard type of escalator. One of the original lifts from Hampstead Station, a reserve lift used for Bank Holiday traffic, has been reassembled in the museum, complete with its original panelling. There is also a display showing the less well known, but still important subject of ventilation.

The subject of bus control and its developing technology is covered in another display. The use of inspectors, time recording clocks, BESI, with an example of how it works and CARLA and BUSCO are all shown.

One exhibit which is sure to be a success is the cab end of a 1938 Tube Stock motor car which has an operational master controller. Immediately in front of the cab is a working set of traction control equipment. This can be operated by use of the controller in the cab and the operation of the equipment can be seen through transparent covers placed around the case. The case itself is mounted on a raised frame to allow the observer a clear view. The equipment is an example of the 1938 type known as PCM, described in the museum as meaning Pneumatic Camshaft Mechanism, which has been fitted in various forms to all London Transport trains since that time.

Apart from all the displays mentioned so far, a number of details are included which demonstrate the museums intention to present as full a story of transport development as possible. Such items as the section of tram conduit, the three different types of block joint incorporated in the track on which the Q23 Stock motor car stands, overhead current wires for trams and trolleybuses, a train describer and a cut-away example of tram track construction, all add to the general scheme of providing a comprehensive survey.

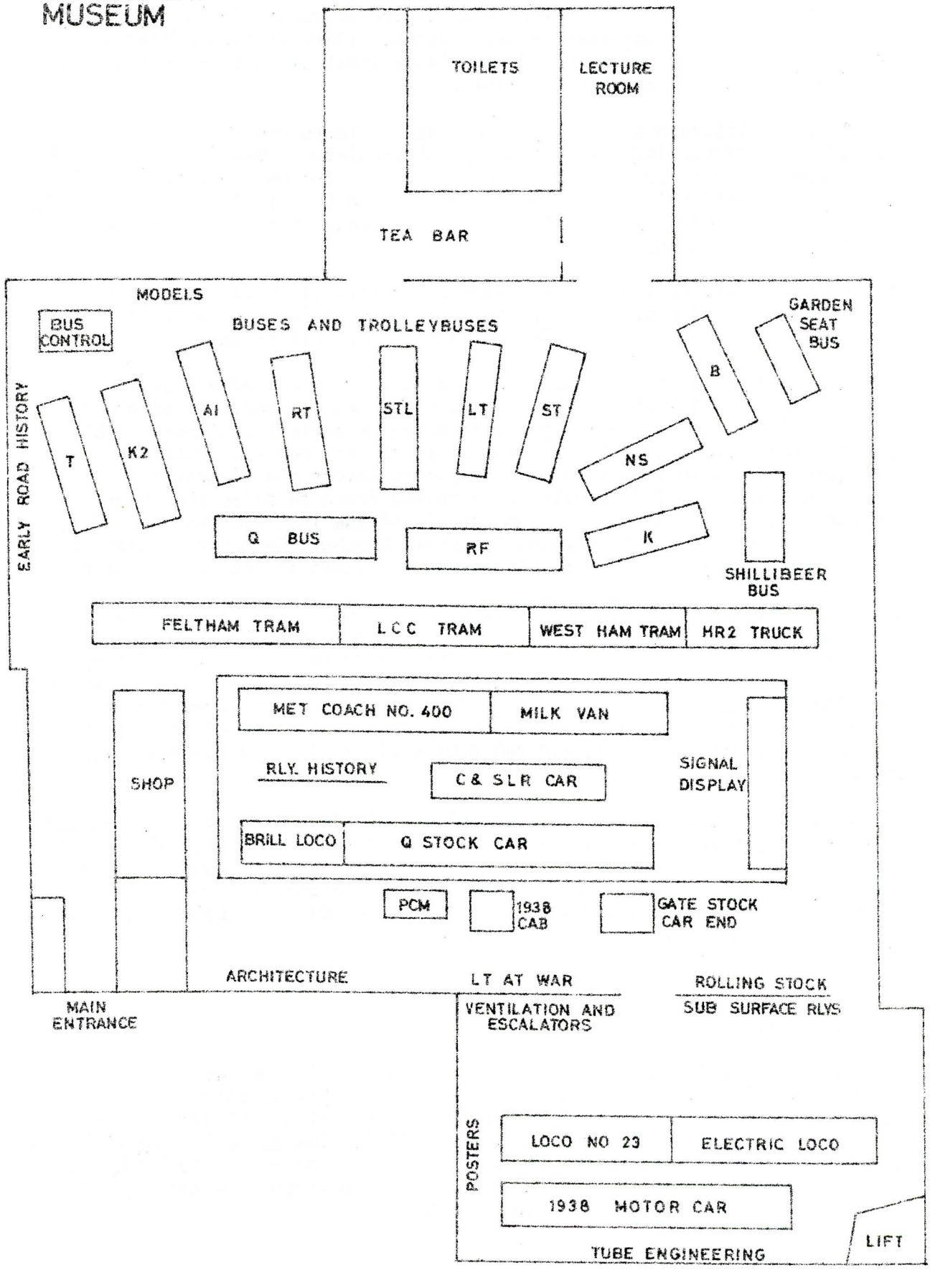
It is intended that a number of audio-visual displays will be available and will be changed at intervals. These will cover various aspects of London's transport history and technological developments. Even without the large exhibits of road and rail vehicles, the museum presents a formidable example of a modern museum which provides a valuable educational resource as well as a purely attractive vehicle display centre.

The Large Railway Exhibits

The railway vehicles on display in the museum are divided into two groups. One of these is in the covered way section and comprises the Metropolitan Railway steam locomotive No 23, the Metropolitan Railway electric locomotive No 5 and the 1938 Tube Stock motor car No 11182. The other is mounted on a plinth in the main building and includes the Q23 Motor car No 4248, the Wooton Tramway locomotive, the C & SLR car, the Metropolitan Railway milk van and Metropolitan Railway coach No 400.

PLAN OF

LONDON TRANSPORT MUSEUM



1938 Tube Stock Car No 11182: This car is an example of the large group of cars which was built to provide services on the Northern and Bakerloo lines from 1938, and examples are still in service on the Bakerloo line. It is a particularly important exhibit as it represents the first in a long line of tube railway cars which have provided the mainstay of tube line services for the last 40 years. It also represents a great technological advance of the era when it was built as it was the first production batch of tube cars which were designed to have all their traction control and auxiliary equipment mounted below the floor instead of in a compartment behind the driver. It was also the first production tube train to use low voltage electrical supplies for lighting and other equipment instead of the former system of direct supply from the 630 volt current rails.

The 1938 Stock had been preceeded by a set of 24 prototype cars known as the 1936 Stock which had experimental versions of traction equipment fitted. The success of the BTH version of this equipment resulted in its being adopted as standard on all future LT trains and the 1938 Stock was the first to be equipped with it. It also represents the first example of a modern electo-pneumatic braking system using individual brake cylinders and a self-lapping brake controller. The controls can be seen in greater detail in the cab section of a similar car, No 11149, described earlier.

The actual car on display here is also of interest as it was used as part of the last train of 1938 Stock to run on the Northern Line on 14th April 1978. After that time it was withdrawn from service for restoration to its appearance during the 1950's, complete with the passenger door control buttons which were in use at that time. As far as possible the car interior has also been finished in the 1950's style but there are no car advertisment cards of the period even though appeals have been made for assistance in tracing examples which can be copied.

Metropolitan Railway Steam Locomotive No 23: This is probably the most famous exhibit in the whole museum. It represents [1] of the class of steam locomotives which were used on the cut and cover lines of the Metropolitan and District Railways from 1864, when the first was delivered, until their replacement by electric traction in 1905. Although the bulk of them were scrapped or sold to other railways at that time, a number survived in London, for use on the goods and branch services of the Metropolitan Railway and as engineers' train motive power.

The locomotives were built by Beyer Peacock & Co. of Manchester and were of the 4-4-0 type. Because of the large amount of tunnel work that they were required to do, they were fitted with condensing equipment which was supposed to reduce the amount of steam which escaped into the tunnels. As this had a detrimental effect on their steaming capabilities, the crews did not always use this device, and the foul atmosphere of the tunnels was a constant cause for complaint from the travelling public. It was one of the reasons why efforts were constantly made to find an alternative means of motive power and which culminated in the introduction of electric traction on the Underground.

No 23 was one of a batch built in 1866 and has been restored to its original condition as far as is possible. It is one of those used by the Metropolitan Railway and was displayed at the Centenary celebrations staged at Neasden in 1963. It was last steamed in 1948 when it was part of London Transport's service fleet. At that time it was numbered L45. The fact that so many of the class were built proved that the design was sound and it is good that a sample has been preserved as a monument to the engineering abilities of the time

Metropolitan Railway electric locomotive No 5: When the Circle Line and the Metropolitan Railway branch to Uxbridge were electrified in 1905, a series of twenty electric locomotives were built to haul trains to Paddington (GWR) and to Harrow where they were replaced by steam locomotives to provide motive power for the remainder of their journeys. These locomotives were replaced between 1921 and 1923 by another series of twenty locomotives built by Vickers of Barrow. Although it has often been stated that the new locomotives were rebuilds of the originals, this was really only a device used by the railway accountants who regarded these machines as rebuilds so that they could be paid for out of revenue. It would seem that most of the materials used in their construction were, in fact, new.

The locomotives soon became firm favourites with the public, and were given names by the Metropolitan Railway in 1927 as part of a publicity campaign designed to draw attention to the delights of living in Metroland, the Metropolitan Railway's name for the areas which they served and which they considered ripe for potential housing development. All the names used were associated with the area and the City where the Met. had its beginings.

One of the locomotives, No 15, was on display at the Wembley Exhibition of 1925 and, in order to allow the interior to be more clearly seen by the visitors, the exterior panels were removed from one side and the interior was finished in white paint. It is a measure of the pride that the drivers of these machines had in their charges that the interior was always kept white long after 15 had resumed its duties, and that one of the regular drivers of this particular locomotive kept a small pot of white paint with him so that he could touch up any damaged paintwork at once.

Most of the locomotives remained in regular use on passenger trains until 1961 when the line was electrified between Rickmansworth and Amersham and modern units of A60 Stock took over all the Metropolitan electric services. No 5, named John Hampden, remained in use as a shunting locomotive at Acton until it was preserved and put on display at Syon Park.

It is of interest to note that the electrical equipment used in these machines was supplied by Metropolitan-Vickers. It was similar in many respects to equipment supplied by the same firm for the tube cars built in 1924 and for the Southern Railway electric stock. Much of the locomotives equipment was replaced during the 1950's by renovated equipment removed from scrapped District Railway cars of 1910 - 14 vintage.

Wooton Tramway Locomotive: The $6\frac{1}{2}$ mile branch line between Quainton Road and Brill, originally known as the Wooton Tramway, was the proud possessor of its first locomotive in January 1872 when a small 0-4-0 engine was supplied by Aveling and Porter. A second engine of the same type was later purchased by the line and both were used for the light passenger and goods traffic which ran on the line during its first twenty years of operation. These locomotives only had 6 h.p. capacity, and were similar to many which were used in the cement industry. The wheels were chain driven and the machines had a large flywheel which gave them the appearance of a traction engine.

After being replaced by more powerful engines in the 1890's the two engines were sold to a brickworks in Northamptonshire. Not long after this, one of them failed a boiler test and was broken up to provide spares for the other. It continued working until 1940 when the brickworks closed. For the next ten years it lay derelict until it was rescued by the Industrial Locomotive Society and London Transport agreed to hold it in safe custody at Neasden Depot. It was eventually restored to its original condition

and was on display in the Transport Museum at Clapham until its removal to Syon Park. It is now on show at the Covent Garden Museum where it can be compared with the other Metropolitan Railway locomotives on display and with the electric vehicles which replaced steam over much of the older Underground lines.

Q23 Stock Motor Car No 4248: This car is typical of the clerestory roofed vehicles which were used on all the Underground lines from the earliest days of electric traction. No 4248 was one of a batch of 50 cars bought in 1923 to replace older cars of 1905 vintage on the District Railway. The older cars, known as the B Stock, had fallen into disrepair as a result of the neglect suffered during the first World War. They were also in a bad way because they were largely constructed of wood which was found not to last so well as the steel construction adopted for later vehicles. The old cars were reconstructed as trailer cars.

The policy of purchasing new steel bodied motor cars and using the older motor cars to replace scrapped trailer cars caused a situation of a mixture of old and new rolling stock on the District Railway that has not been fully resolved until the introduction of the D Stock during this year. It has also meant that some interesting old cars have survived much longer than would otherwise have been the case. No 4248 is just such a car as it was in regular passenger use on the District until 1971, over 45 years since its delivery when new.

The car is also interesting as it has had few alterations from its original condition, apart from its equipment with air operated doors and its conversion from non-automatic traction control to automatic control. It was also at first provided with electro-pneumatic brakes in 1939, and is the only example of a car in the museum which has the original brake equipment and the added electro-pneumatic equipment. The car on display has had the doors left open on one side so that the interior may be seen more easily, although, in order to prevent damage to the inside, visitors are not allowed access.

If careful observation of the trailing end of the car is made, the steel panels which now cover the former windows provided as well as at the drivers end, can be seen. At the leading end on the nearside of the cab front can be seen the original site of the headlights, which were on that side on all early District Railway cars.

The advantage of having this car, and the others which are with it, on the raised platform section of the Museum is that the underneath can clearly be seen. One wonders if it might not be sensible to label those items of equipment which are visible. Some of them, for example the air compressor and the traction equipment, represent standard types which were in use over the whole of the Underground for over seventy years.

City & South London Railway Car: When the City & South London Railway was opened in 1890 it was the first Underground electric railway in the world. The trains originally consisted of 3-car sets hauled by small electric locomotives, an example of which is at the Science Museum. One of the early examples of the cars is shown at the London Transport Museum and has survived since the line was closed for conversion to modern tube railway standards in 1922. It was originaly selected for preservation when the line closed as it was closest to the original type of car which were known as the "Padded Cells" because of their very small windows and high backed button upholstery. Versions of these cars built after 1893 had larger windows more in line with more recent designs.

When the C &SLR cars were formed into trains the two intermediate platforms were equipped with sliding gates which could be removed in one piece if required. The end platforms were slightly different and were not available to passengers. A model of the car in the museum is also on display which incorrectly shows the same car which has the same short platforms at both ends, something which would never have been seen when the cars were in service.

The car on display is fitted with an example of the early type of trucks fitted to these vehicles, but which were modified after a few years so that the original single spring fitted to both axle boxes was replaced by the individual springs more commonly used on many British trucks.

Metropolitan Railway Coach No 400: In 1898 the Metropolitan Railway introduced a new and, for the time, sumptuous, type of passenger coach which soon became known as the "Bogie Stock". This was because much of the line's earlier stock had consisted of 4-wheel and 8-wheel rigid stock. Eventually the name "Ashbury" was attached to these coaches as this was the name of the company in Manchester which had built most of them.

No 400 has had a most interesting and diverse history, like many of the vehicles in its class, but it is also interesting in its own right as it is the only surviving example of a vehicle actually built by the Metropolitan Railway at Neasden Works. Very few coaches were built there as most of the orders went out to British car building concerns.

No 400 was built as a second class locomotive hauled coach at Neasden in 1900 and remained as such until 1921 when it was converted to work in an electric multiple unit train with another type of car, known as the saloon stock, acting as the motor cars. These were known as the W Stock trains. The motor cars were replaced by new coaches in the late 1920's and the trains became known as the MW Stock. They continued in this form until the begining of the last World War when the bulk of the Bogie Stock coaches were withdrawn. Six of them, including No 400, were retained for working on a push-pull steam service on the Chesham Branch. They continued in this way until replaced by new A60 cars in 1961.

As a result of the various conversions done to this coach there were a number of changes in its equipment. The original vacuum brake equipment was replaced by Westinghouse air brake equipment in 1921 for its use as an electric train, and this was then changed back to vacuum equipment to enable it to operate with the steam locomotive on the Chesham Shuttle service. At that time too it was renumbered 519.

The six coaches withdrawn from the Chesham Branch in 1961 were recognised as being worthy of preservation and all but one, which was scrapped, were kept for the future. Four went to the Bluebell Railway in Sussex and No 400 was stored at Brighton for eventual exhibition. It did not reappear in London until it was brought back to Ruislip depot by London Transport for restoration. A great deal of careful work was done to the exterior to bring it back to its former Metropolitan Railway finish, although the old push-pull equipment was left intact. It is therefore somewhat of a hybrid although this adds to its interest.as befits a museum exhibit. It is also interesting that the lettering applied to this car differs from the other Metropolitan Railway teak bodied vehicle, the Milk Van, in that the block lettering is blue and not black as was incorrectly applied to the other vehicle.some years ago.

Metropolitan Railway Milk Van No3: This vehicle was built in 1896 by the Birmingham Railway Carriage and Wagon Co. as a van for attachment to passenger trains for the carrying of milk. It survived to be taken over by the L.P.T.B. in 1933 and eventually became a breakdown van with the number BD 221. It was later renumbered BDV 700. It was restored for exhibition in the Clapham Museum and was used in the Metropolitan Railway centenary display at Neasden in May 1963.

Gate End of tube car: This exhibit is of the rear end of a gate stock tube car of the type built between 1900 and 1907 for most of the London tube lines. The car from which this end was built was one of the Hungarian cars built for the Piccadilly line and, after service on that line, was used as a ballast locomotive until 1954. It was then stored at Acton for a time, and it was hoped that it would be preserved. However, only the gate end survived, but it shows clearly how the rear platform gates were operated.

This exhibit is unusual in that the firm which built it was located in a town called Raab, near Vienna. As it was in the Austro-Hungarian Empire it had the name Hungarian Railway Carriage and Machine Works. The position of the exhibit in the Museum, near the 1938 Stock cab end, presents an interesting contrast in styles.

The Road Transport Exhibits

There are two separate sections to the road transport vehicle display. One consists of a piece of tram track on which are located three trams and an HR2 tram bogie. The other section comprises all the buses and trolleybuses arranged in a fan so as to allow the best possible advantage and to fit in the limited spaces available. The effect is very good. As the history of the railway vehicles is quite well known to Society members, not as much space has been devoted to them as is included below for the road transport vehicles.

Class E/1 Tramcar No 1025: The E/1 class was introduced by the London County Council Tramways in 1907, and was an improved version of Class E, both classes representing the most up to date in bogie tramcar design. They had enclosed top decks and four large windows on each side of both decks, giving them a pleasing and tidy appearance. However the platforms were not enclosed.

Between 1907 and 1912, 875 E/1 cars were built, mainly by the Hurst Nelson and Brush companies, but No 1025 is one of a small batch of 50 cars which were constructed by the LCC at their own works at Leytonstone. In the 1920's more E/1's were built, making a final total of 1050 cars, the class being regarded at one time as being the LCC's standard tram.

The car is equipped with maximum traction trucks (the driving wheels are of larger diameter than the trailing) which had two motors of 63 h.p. These replaced the original 42 h.p. motors about 1924. Current was collected by a reversible pole from the overhead line, or from the ground by means of a conduit supply taken to the car through a removable "plough" positioned between the trucks. It was supported by a device known as a "plough carrier". Originally the carrier was attached to one of the trucks, but it was later fixed to the body, and examination of No 1025's "A" end truck will show from where the original carrier was removed.

When built, the car had wooden seating throughout, longitudinal in the lower saloon and transverse reversible pairs in the upper deck. Decor of the

saloons was of wood varnish. Improvements were made in the 1920's during the course of a 'Pullmanisation' programme, which included fully upholstered seating in the lower saloon, transverse pairs and singles, also corner side benches. Cushion bases were provided to the upper seats, although the wooden benches remained. Brighter interiors came with the white painting of ceilings.

Externally the appearance of 1025 did not alter greatly during its long life. Platform screens were fitted in 1938, and at some time in later years plain panelling between decks, replaced the original, that had attractive frame mouldings.

1025 was always a South London car, spending most, if not all of its 45 years service at New Cross depot, running finally on 6th January 1952 on route 74 (Blackfriars - Grove Park) soon after which it made a final visit to Charlton works to be renovated for preservation. In the spring it was taken to Reigate Bus Garage for storage, remaining until the setting up of the Museum of British Transport at Clapham, when it joined trams from various other systems, on a site where until 1951 there had been a tram depot. In 1973 came a further move, this time to Syon Park where it stayed until 21st July 1979, moving to Covent Garden during the evening and entering the Museum in the early hours of the 22nd.

1025 was externally repainted during its last months at Syon Park, and is finished in general detail as when finally in service. Route number plates, and destination blinds are usually set out for route 40.

Open Balcony Tram 290: Formerly West Ham Corporation number 102, it entered service in January 1910. A product of the United Electric Car Company of Preston, this style of tram was commonplace on municipal systems. The short body is mounted on a 7ft wheel base, four wheeled Peckham R7 truck. By comparison with the E/lit is of antique appearance although it was introduced over two years after the first of the LCC class. Originally there were six drop windows on each side of the lower saloon, but in 1922 these were replaced with three larger windows matching those of the upper deck.

Upon the formation of the LPTB, the West Ham cars at first retained their stock numbers but with the addition of the Suffix letter H. Later, all non ex LCC cars took vacant numbers in or from an extension of the LCC series. Thus 102H became 290, which in LCC days had also been a four wheeled car but of class C. It continued to work from West Ham depot until early in 1938 being one of the last single truck trams in London and moves to preserve an example were successful, and it was sent to Holloway depot for storage. Ar a later date it was transfered to New Cross Depot where it remained throughout the war years and for some time afterwards.

In 1952, it moved into Charlton Works for renovation, and then with the newly preserved number 1025, went off to Reigate for further storage. Its subsequent history is similar to that of 1025, movingtto Covent Garden over Saturday and Sunday 14th/15th July 1979. Of its 70 years of existance over forty have been as preserved, being one of the first electric trams to be saved for posterity.

Metropolitan Type U.C.C. 355 (Feltham Tramcars): 355 is one of a hundred type U.C.C. tramcars known as "Felthams", that were built by the Union Construction Company from December 1930, at that firm's Feltham factory, hence the name given to these cars. 54 were supplied to the Metropolitan

Electric Tramways, of which 355 is one. Others were built for the London United Tramways. The Met. Feltham's entered service from February 1931, running out of Finchley Depot.

Of impressive design, enhanced by their 40 feet length, they were a considerable step forward on previous M.E.T. and L.U.T. trams, having comfortable seating for 64 and large areas of standing space which would accomodate at least 20 passengers. Drivers were seated in a cabin which was separated from the passenger standing area. Exits were provided at both front and rear.

The identity of 355 was to be short-lived, only remaining as such until renumbered by the LPTB as 2099. Also short-lived was its stay on the routes for which it was built as trolleybuses soon took over, number 2099 going over to Streatham in March 1938, to which place ultimately all the class (M.E.T. and L.U.T.) became allocated.

About a year before the first stage of the post-war tram to bus conversion scheme, 2099 left London for Leeds where it was tested, and used for initial driver training prior to the main batch of cars arriving. A total of 92 went to Leeds 2099 becoming the first car in the numbering series as 501. Less than a decade later, the trams in Leeds also came to an end, and 501 became the subject of a private preservation scheme, returning to London of 3rd December 1959 when it was given a home at the Museum of British Transport at Clapham. There the preservation grant restored it faithfully to M.E.T. 355 livery as it started nearly 30 years beforehand. As with the other trams, 355 went in 1973 to Syon Park and on to Covent Garden on 7th/8th July 1979.

K.2. Trolleybus No.1253: One of 300 K1 and K2 trolleybuses constructed between October 1938 and the following June, it entered service early in March 1939, at the height of abandoning of the North London Tramway network. The K class vehicle incorporated both chassis and body by Leyland. Motors were supplied by Metropolitan Vickers. As a K2 No. 1253 has a English Electric controller.

For most of its working life 1253 was allocated to Hackney (later Clapton) depot, going there in June 1939 and working on routes 555, 581 and 677.

When buses took over in April 1959, it was transfered to Walthamstow, staying there for just over a year and in April 1960 it went to its final depot at Wood Green. Early in 1961 it was selected as the specimen trolleybus for the museum of British Transport, replacing the previous choice which was C2 No. 260. Transfer to Clapham was done in the May but its stay was short, as in 1963 it went into store in Wandsworth garage.

It remained at Wandsworth until sent away for repainting prior to going to the London Transport Collection at Syon Park in 1973. Its stay there was also short as it soon went into store at Camberwell Garage. During 1979 it visited Bexleyheath and Stockwell Garages on open days prior for its entering Aldenham for repair and repaint after which Clapham became home again for a short while. It arrived at Covent Garden at dawn on 28th January this year and is displayed with route blinds appropriate to Clapton depot.

NS 1995 Bus: When introduced in 1923 the NS type, although still on solid tyres, with open top and outside staircase, represented a significant forward step in the progress in motor bus design. It was the transition from the early types to the later much improved designs. Allowance had been made for covered tops to be included, but police regulations at the time did

not allow these to be fitted until about 1925 when most of the class were given this improvement. Later, in 1928, a further improvement came when they were fitted with new wheels having pneumatic tyres, although many of them retained their solid tyres until as late as 1937. NS 1995 is of the pneumatic tyred variety, and was amongst the last to be withdrawn, in November 1937.

As with many of the other preserved buses the NS was stored out of London during the war, and it is remembered as being seen at Staines garage about 1942. It remained in store, although later at Reigate, until required as an exhibit at the Clapham museum. When that establishment closed early in 1973, the NS went to Aldenham for restoration and renovation. Soon after it was seen at bus displays, in working order, being driven from and to its new home at Syon Park.

During the "150 Years of London Buses" celebrations of 1979, the NS took part in the Easter Parade and the celebration run from London Wall to Hyde Park. Under its own power it made its own way from Clapham to Covent Garden on the 7th March last. It is displayed as on Route 29 to Victoria Station.

Green Line 7T7 Coach T219: Surviving from the early Green Line bus fleet, T219 represents the Green Line "image" of the early and middle 1930's. Entering service from 1931 out of Romford garage, it lasted until March 1939 when it was one of the last to be superseded by more modern types. Following a short period in store which lasted until after the start of the war, it was converted to a staff ambulance, taking the number 428W, and in this guise served for a while at Golders Green depot. After the war it became T219 again, but as a bus at Amersham garage. During the next few years its location frequently changed eventually finishing up at Hounslow, being withdrawn from there at the end of March 1950. It was selected for preservation and was sent to Reigate for storage with the other preserved vehicles.

External restoration to 1931 Green Line coach condition came with its inclusion in the Clapham Museum Collection. Being in running order it was entered in some of the early HCVC runs to Brighton.

From 1973 to 1978 it was exhibited at Syon Park and in July 1979 was at the July vehicle parade.

At Covent Garden it is displayed in the restored condition as described above.

Country Bus ST 821: Following the LT type a short two axle version was introduced in 1930 coded as ST. The body style was similar to the LT, and mounted on an A.E.C. Regent chassis with a petrol engine.

ST 821 went to a subsidiary of the General, and became a Country Area bus under the auspices of the LPTB, having a small suffix letter B (bus) added to its stock number.

As designed the ST had a rectangular indicator box, which allowed only number and destination, and these were replaced by a deeper variety to permit display of more information, but ST 821 escaped this treatment, and was still retaining the small indicator box as such when withdrawn in 1949, still as a Country bus at Watford. Preservation followed, probably because of its original design feature, and the bus was painted into Central red and white.

Whilst part of the Clapham Collection it was used for filming, and "General" stickers were applied over the LT fleetname, these being retained during

the Syon Park period. A 1979 renovation saw the vehicle restored as a Country bus, indentified again as ST 821B, in Green and White livery, with Watford area blinds.

Replica. Shillibeer Horse Bus: The 51 year old veteran is a replica, built in 1929 of the earliest London "Omnibus", that operated, by George Shillibeer 100 years before. The replica, constructed by the L.G.O.C. at Chiswick Works, is a simple covered carriage, seating about 20, requiring the power of three horses for haulage.

The Omnibus Centenary of July 1929, was the reason for this re-creation, and after carrying passengers for a few days over a route similar to Shillibeer's it was the star of the main events of 6th July.

For the next 40 years or so it was stored, and very rarely seen only being on public exhibition with the opening of the Museum of British Transport in 196 , later the London Transport Collection at Syon Park from 1973 to 1978.

In 1979 for the 150 years of London Buses events, the Shillibeer was externally completely renovated, and in resplendent condition headed the Anniversary procession of 8th July from the City to Hyde Park. In November it made another appearance when it took part in the Lord Mayor's Show.

Tilling Horse Bus No.1851: The oldest road vehicle in the Museum is the 1851 double deck horse bus, built and operated by the well known Peckham firm, Thomas Tilling and features the back to back seating on the upper deck, known as the "Knifebound" type. The bus was normally hauled by two horses, but a third could be attached for climbing hills.

Tilling used it for over 40 years in London, after which it took up less arduous duties in Sussex for about another 20 years, when it was set aside but fortunately not broken up. During the 1920's its historic value was recognised, and it was brought back to London for restoration. As with the Shillibeer it featured in the Omnibus Centenary events of 1929. Seen only occasionaly afterwards, until becoming part of the Clapham Collection in the early 1960's. By the time it entered Syon Park in 1973 it was over 120 years old, and became the subject of very thorough, but difficult renovation, being faithfully restored in the green and cream Tilling livery with the "Times" fleetname on the lower panel.

Garden Seat Horse Bus: The latest of the three horse buses is the "General" of the early 1890's, a larger vehicle than the earlier Tilling, evidence of which are the greater number of and larger windows to the lower deck. The The type name of the bus, like the "Knifeboard" was determined by the upper deck seating. Forward facing seats that were likened to those in gardens, brought about the description "Garden Seat" for these, later and amongst the last horse buses.

After about 20 years service, the vehicle on display was sold off as a residence, returning to the General in time to be restored for the 1929 events. Subsequently its history has been similar to the other horse buses, being on display at Clapham and Syon Park.

'B' Type /Open Top Bus/ B 340: The earliest motor bus in the collection is the 1911 example of the celebrated 'B' type of which over 5000 were operated by the LGOC, and were a pioneering achievement of motor bus standardisation.

Built by the General at their works at Walthamstow, it has a wood and metal

chassis, and is powered by a 4 cylinder engine placed in front of the driving platform (Normal Control). The body, of horse bus influence, is carried high on the chassis, and has seats for 34, of which 18 are on the open upper deck.

The B type are perhaps best remembered for their service in Europe during the Great War, taking troops to and from the battlefields. Another of the type, B43 'Ole Bill', was kept as a reminder of those days, and is now at the Imperial War Museum. B340, however, did not go abroad, but went into war service on the home front for a couple of years, returning as a bus by the end of 1916.

Withdrawal came in 1924, after a short working life of 13 years, when larger and improved buses were being produced.

Now in its 56th year of preservation, it is honoured to have a white uniformed 'driver', the moustached effigy wearing an appropriate LGOC summertime issue. It is exhibited in the earlier General motor bus livery of red, lined out in black, with white relief.

LGOC Open Top Bus No. K424: The second and larger of the open topped buses is K424, and is a combination of AEC chassis and engine with an LGOC body. Although retaining the style of the 'B' type, it was in fact a considerable advance on the earlier type. A new feature was the placing of the driving position beside the engine (Forward Control) allowing a longer saloon, whilst another was the use of rear wheel arches to give a lower position and wider body.

Over 1100 K type were built, some as single deckers, and saw service until 1932, when the one on display was saved for posterity.

It was put into store making only infrequent public appearances afterwards. Whilst at Reigate garage in the 1950's it was completely repainted. When transfered to the Museum of British Transport at Clapham, it was put into full running order, subsequently making the journey to Brighton and back on several of the early Historic Commercial Vehicle runs. The next decade saw it at Syon Park from 1973 to 1978, after which it returned to Clapham, now used as a bus store. K424 is in very good mechanical order and took part in both the 150 years of London Buses anniversary run of last July, and the Lord Mayor's Show in November.

On 7th March this year it also ran under its own power from Clapham to Covent Garden. It is in the General Red and White livery, but without the panel lining as on the 'B' type.

6 Wheeled Bus LT 165: This impressive bus dates from 1931, and is a later version of the type that originated in 1929. A new style of body mounted on AEC 6 wheeled Renown chassis was given the code letters LT. The first 150 had open staircases, but on later vehicles such as LT 165, spacious enclosed platforms with covered stairs finally broke away from previous designs.

A diesel oil engine replaced the original petrol one in 1938, as part of a conversion programme applied to most of the double deck LT's.

The front end appearance is one of three variations of design to be seen among the first 950 LT's, and has a roller blind indicator set into the cab top, which originally displayed route number and destination. Other places on route were shown painted white on a black board below the upper deck windows, and externally illuminated at night. During the war this was discontinued,

all details being included on the blind display, an arrangement that became permanent, and the bus is preserved in this way.

During the thirties and forties, the LT type was a daily sight in London streets, but soon vanished when the post war replacement scheme got under way. LT165 which started at Mortlake garage in 1931, finished its working days at Leyton in August 1949.

It joined the growing collection of preserved buses at Reigate, going on to Clapham a decade later. Later still in 1973 it joined the London Transport Collection at Syon Park. During 1979 it was fully renovated by apprentices at Aldenham Works, being turned out in a guise to represent a London bus during World War Two.

STL No.469: In the early 1930's a further combination ofan AECpetrol engined chassis with LGOC designed body was classified as STL. The first examples were very upright and box like in appearance.

A later development of which STL 469 is an example, was made by constructing a body with a pronounced lean backwards to the front, about 400 of these being built, taking the STL from LGOC into London Transport influence. Under the LPTB a compromise was reached, the fronts sloping to a lesser degree, and the 2000 or so that were produced became the standard pre-war bus. In 1939 in keeping with vehicles being currently built STL 469 was fitted with a diesel engine. Not all these earlier STL's were converted and the first STL's with box bodies all remained petrol until withdrawn.

When new in 1934 STL 469 was allocated to Chalk Farm, a garage at which this variation of STl was common for many years. It was still to be found at Chalk Farm after the war, but in 1951 was transfered to Barking garage. When withdrawn in 1954, it had completed a period of Country Area service at Dartford.

As presented at Covent Garden, it is in the post war livery of red with cream waist band and upper deck window frames. Featured is a restricted use of the front and rear indicator boxes, which although a war time measure lasted until the early 1950's. Until the recent repaint at Aldenham, the livery had been the later version, with upper window frames painted red, and with all indicator box apetures in use.

Country Bus Q.55: Despite its modern appearance, Q55 dates from 1935, when it entered the service of the Country Bus Department at Swanley Garage.

The need to utilise the space at the front of buses, brought about in 1932, the A.E.C. 'Q' type of chassis, in which the engine was repositioned on the offside, just behind the front axle. Initially the LGOC operated a Q single deck bus on a central London route, and within a few years London Transport were operating 233 examples with various body types, to suit both Country and central bus work, as well as a number of Green Line coaches.

The Q type vehicles were generally single deck, but 4 double/deck buses eperated in pre-war days. A double deck Green Line coach version was also built, but only saw a short period of service.

Q 55 is of a unique body type, featuring an unlevel roof line, sloping downwards from front to back.

The Country 'Q's were among the last of the pre-war bus types to be withdrawn Q 55 last running in service in April 1953 from Reigate garage.

'Diddler' Trolleybus No.1. Class A.1: Painted in London Transport livery Trolleybus 1. was the first in line of the largest trolleybus fleet in Britain, which consisted of over 1800 vehicles.

New to the London United Tramways in January 1931, it was the leader of 60 such trolleybuses built by the Union Construction Company, and allocated to Fulwell depot, for use on routes in the Kingston area. Trolleybuses were chosen for this district, falling into line with a policy of using this type of vehicle for the replacement of out of date trams, where lower traffic levels did not warrant the use of the high capacity "Feltham" trams.

For reasons that were obscure they became known unofficially as "Diddlers" but officially the first 35 were class A1., while the remaining 25 were classified as A.2. They were very much a hybrid between bus and tram, the six wheeled chassis being a generally similar one to that of the LT type bus, even to the electric motor being located forwards in the then unusual position for a bus engine. Electrical equipment was by English Electric, and as an A.1. the suvivor has an 80H.P. motor.

No.1 ran for 18 years on routes from Fulwell depot, being withdrawn in 1949, and sent to Reigate bus garage for storage. In March 1961 it was moved to Clapham where it remained until February 1973, except for a few days in May 1962, when it returned to Fulwell to perform a single journey from Twickenham to Kingston, on the afternoon of 8th May 1962, the last day of trolleybus operation in London. On arrival at Kingston it was hastily towed back to Clapham, not to emerge again for nearly 11 years. Whilst later resident at Syon Park, in 1975 it paid a visit to Aldenham Works, where a very necessary repair followed by repainting was carried out.

Since May 1962 it had been exhibited with 'Last Day' destination box displays, but at Covent Garden it now has proper indicators relating to routes from Fulwell Depot.

A.E.C./Park Royal RT 4825: One of the most graceful bus designs of all time, the RT was the typical London double decker of the 1950's.

Between 1947 and 1954, no less than 4674 buses of this type were produced, and adding on the 151 earlier RT's brought about a grand total of 4825. This fact is reflected in the identity of the RT at Covent Garden, which bears the highest bonnet number of the series - RT4825.

The chassis is the AEC, Regent MK111,0961 model incorporating a 9.6 litre AEC A204 engine. Transmission is of the fluid flywheel type.

The body has the later standard indicator display arrangement of three apertures grafted together beneath the upper deck front window, This arrangement was restored in 1949, having been used previously in the 1930's on the earlier members of the STL type (As STL 469). In the meantime, on the later STL, and earlier RT vehicles, the route number was positioned in the roof dome giving these buses the name of "Lighthouses". A difference to the grouped indicators of the earlier STL's is the siting of the route numbers on the nearside, whereas on the STL it was offside. The RM type returned to the STL arrangement, whilst the DMS etc, have the RT layout. At the Museum, comparison can be made between the RT and STL indication arrangements, as the two types stand together. The body of RT8/2 variation, is of Park Royal manufacture, and numbered 8477. When new in November 1953 it was mounted on the chassis of RT4600. For its inclusion in the London Transport Museum RT4825 was repained at Aldenham during 1979.

Single Deck RF Bus No. 537: In 1950 a trial was made with a bus hired from A.E.C. as the prototype for the new Regal Mark IV chassis. Subsequently orders for vehicles based on this prototype amounting to 700 were placed. The first of these was delivered in 1951 and was coded RF. The bus had a 9.6 litre 125 B.H.P. engine mounted horizontally under the floor. The transmission was basically that which was fitted to the RT type.

Various different body versions were built including a private hire type which had glass panels in the roof, a country bus type with an air operated door and a Central Area type with only a door opening. Later another type was introduced which had a special body for operating the B.E.A. fleet of coaches.

Originally all the RF buses were required to have a two man crew but from 1954 some were converted to one man operation but only on those buses fitted with closing doors and later all the RF buses not fitted with closing doors were equiped with them to allow them to be used in this way.

Number 537 was put into service in 1953 and ran until it was withdrawn from service in 1977. Earlier this year it found a final resting place at the new London Transport Museum at Covent Garden.

The Editor is grateful for all the assistance given in the compilation and preparation of this supplement by Piers Connor, Desmond Croome, Bob Greenaway, Fred Ivey and members of the LT Museum staff who allowed us access prior to opening.

LETTERS TO THE EDITOR

Sir,

London Transport appears to have made history - with a first. To my knowledge they are the first body in the world who require an entrance fee to their retail premises and I have travelled to most countries in the world.

On Monday 31st March 1980, I went to Covent Garden during my lunch break to visit the new LT shop to see what may be on offer for sale. To my utter amazement, I was informed that I could not go in unless I purchased a ticket to enter the museum, as the shop is within the museum. I certainly was not going to pay £1.40 to have a look round a shop on the off-chance I might buy something. As it was my lunch hour, I do not have enough time to look around the museum to get my money's worth before entering the shop.

When the old poster shop was in Griffith House I was able to visit there at regular intevals to see if any new items were on sale which were not advertised in the catalogue. On occasions, I found a number of items. There was also a number of things on sale at Griffith House which were not available at 55 Broadway, because of the limited space to keep stock at the latter place.

Does this now mean that the enthusiast of London Transport and its railways and bus systems is unable to see all that LT have to offer for sale unless £1.40 is paid first? Are all the photographs (a collection for sale which LT are so proud to advertise), the General Arrangement drawings and others of trains and other vehicles and the 'in-house' items such as information posters and line diagrams no longer available to us? I hope that somebody is able to say that this is not so, but wherever they are to be in future, surely we will not have to pay an additional £1.40 on what is being purchased.

Yours sincerely,
Louis A. Bartrip
Harrow, Middlesex, 3. April 1980.

Sir,

Having just spent £1.40 for admission to the new LT Museum at Covent Garden, I feel it is worth putting pen to paper to comment on London Transport's showpiece.

Showpiece it certainly is, and the staff of the Museum should be congratulated and feel justifiably proud of their efforts in making the best of a superb building. It is pleasing to see that the road vehicles are not arranged in straight rows - being formed into a semi-circle allows maximum study and observation. Although it has been necessary to place most of the rail vehicles on a built-up 'table' this adds considerably to the interest as one can study closely the underneath of those vehicles.

Several unexpected attractions include the wrought-iron arch from High Street Kensington station, a typical LT seat from Hammersmith station, incorporating the station name as part of the structure, and the old type of District Railway train describer - enamel plates with illuminating arrows.

Found all the way around the Museum walls are pictorial displays of transport themes in London. Being well displayed, one could spend a whole day just studying these. All in all, I think the LT Museum are perfectly justified in charging £1.40. Whether half an hour, or a whole day is spent, it is certainly value for money. Even the onlooker who visits the Museum will be, I feel, fascinated and informed.

Yours sincerely,

R.B. James,
Epping, Essex. 6.4.80.

Underground News is published by the London Underground Railway Society, Correspondence should be addressed to the Editor, 13, Castleton Road, Eastcote, Ruislip, Middx. Correspondents are requested to enclose a stamped addressed envelope if a reply is required. Opinions expressed are those of contributors and not necessarily endorsed by T.L.U.R.S.

OPPOSITE PAGE

TOP LEFT: 1938 Tube Stock car 11182 at Ruislip on 15.9.1979 prior to its journey to the L. T. Museum at Covent Garden that evening. (B. R. Hardy)

TOP RIGHT: E1 tram 1025 on its low loader at Syon Park on 21.7.1979.

UPPER LEFT: Metropolitan Electric Locomotive No. 5 "John Hampden" at Covent Garden being made ready for its movement off the lorry into the 'Covered Way' in the early hours of 23.9.1979.

UPPER RIGHT: Met. Rly No. 23 gently being run into the museum early on 26.9.1979.

LOWER LEFT: The 'Feltham' tram No. 335 under protective polythene sheeting in the early hours of 22.7.1979.

LOWER RIGHT: Ex West Ham Corporation tram no. 290 in place early on 22.7.1979 awaiting the arrival of the E1 tram up the ramp shown in the foreground.

BOTTOM LEFT: Trolleybus No. 1, RT 4825 and STL 469 in place on the day of the Press preview, 24.3.1980.

BOTTOM RIGHT: Part of the new lift exhibit shows a typical decorative grille from above a lift entrance, and a wall mounted station clock.

BACK COVER

TOP LEFT : Replica of the 1829 Shillibeer 'Omnibus' in the museum, 24.3.1980.

TOP RIGHT: NS 1995 and K 424 in the museum next to tram 290, 24.3.1980.

MIDDLE LEFT: Signal frame and diagram with train describer apparatus, 24.3.1980.

MIDDLE RIGHT: Hand painted Met. Rly. coat of arms on coach 400, 24.3.1980.

LOWER LEFT: Cab end from 1938 tube stock car 11149, 24.3.1980.

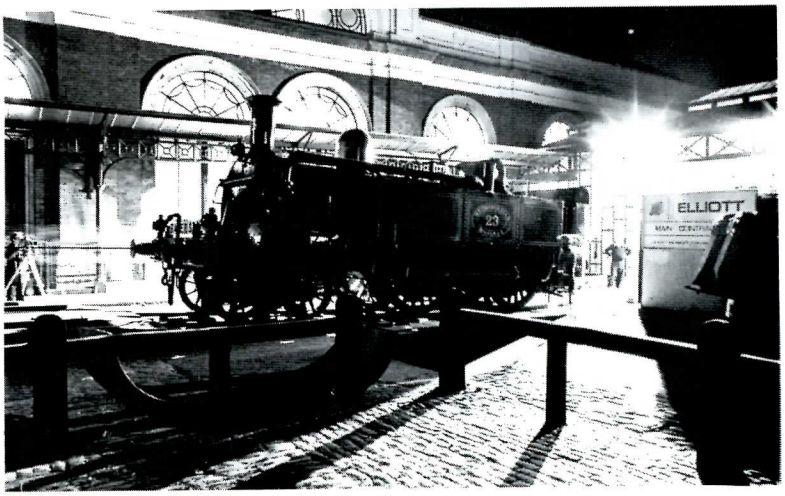
LOWER RIGHT: Gate stock end at Acton Works 11.5.1961 after restoration. The car from which this was taken was originally G.N.P.& B.Rly. driving motor no. 51 of 1909 and built in Hungary. In 1926 it was renumbered by the L.E.R. to 128, and in 1929 it became ballast loco. no. L.16

(All above photographs by R. J. Greenaway except where otherwise credited)


SCANIA
141


VOLVO
SUNTERS
TIR


SUNTERS
HEAVY HAULAGE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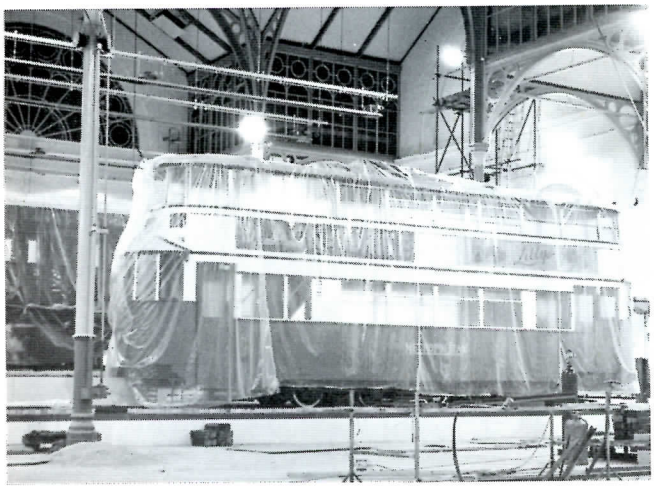
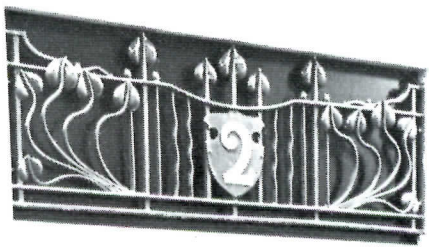
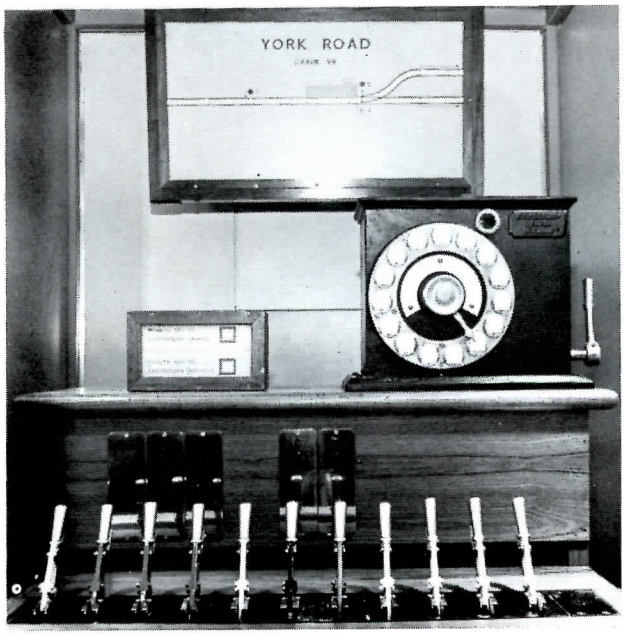



LONDON TRANSPORT




OMNIBUS


28
VICTORIA STN
37


YORK ROAD


METROPOLITAN RAILWAY