

TfL Corporate Archives Research Guides: World War II 75th Anniversary Edition

The London Passenger Transport Board 'Makes-do-and-Mends'

What equipment did the London Passenger Transport Board manufacture? What materials were salvaged to support production? Using archival records from Transport for London's collections we show you how the organisation made the most of materials available to support the war effort.

During World War Two, British citizens were innovative in the face of shortages. The British government's intervention into the everyday included food and clothes rationing, and the public had to 'make do and mend' with whatever they had available.

Fabric was essential for war purposes, such as uniforms. By reducing civilian clothing production, factory space and labour could be freed up for war production.

'Make do and mend' on a bridge in Kilburn. Air-raid damage at Kilburn and Brondesbury Underground station. Wooden framework has been constructed to replace the missing part of the bridge and a train can be seen running over this. 1940. Image courtesy of London Transport Museum 1998/35536



The attitude of conscientious austerity spread into all parts of life, including the workplace. The London Passenger Transport Board (LPTB) was no exception.

Horsehair blinds salvaged to make brushes Horsehair was salvaged from window blinds off former Metropolitan line carriages. These were made into brushes at Acton Works which were used to clean machinery and dust materials in LPTB workshops.



Make and Make-Do In Our Workshops

OUR old friend the horse, who has no place in mechanical transport, has made it an unexpected bequest. The window blinds on some Metropolitan Line cars, lately discarded, were woven of horsehair and linen. Now a team of women at our Acton Works are turning those blinds into brushes. It is done by taking a strip of the material, pulling out enough linen strands to leave a fringe of hair, wrapping the material round a handle to convert the fringe of hair into a bunch of bristles, and then securing it to the handle by scrap metal and nails.

The new brushes are used to clean machinery and dust materials in our workshops, and there will be enough of them to last for some years. We are pleased to record that the invention is credited to someone in the department of the Chief Mechanical Engineer (Railways), where (as at other of our works) so many good ideas have been born.

Article about salvaging horsehair from window blinds from former Metropolitan line carriages. These are made into brushes at Acton Works which are used to clean machinery and dust materials in London Transport workshops. The idea came from a member of Chief Mechanical Engineers staff (Railways). March 1943.

Archive ref num: LT000030/042

This ethos was embraced in the sphere of manufacturing. Why build lots of manufacturing facilities and work out how to train thousands of staff when industries such as transport already had the factories and were already used to training?

20,000 gun components, 80,000 sea mine components, 101,000 parts for Bailey bridges, and 158,000 2 inch shells were just some of the war items manufactured at LPTB factories, by LPTB staff.

897 lorries were assembled and tested; 49 breakdown lorry bodies were designed, constructed, and equipped; 55 bridging pontoons were constructed for the campaign in North-West Europe; 510 armored fighting vehicles were overhauled.

42 tanks were altered and equipped for mechanical bridge laying; 20 Sherman tanks were modified to work in 10 feet of water for use in the D-Day landings; over 250,000 assemblies and components were constructed for armored fighting vehicles.

*“We have resources of men, material and equipment which are not now full employed. We can see that these, too, are applied to the greatest effect towards the purposes of war”,
Frank Pick, LPTB Vice Chairman*



PENNYFARE

LONDON TRANSPORT STAFF NEWS

PENNYFARE (War Series) is published on the 15th of each month. It is distributed free of charge to every member of London Transport's Staff, including those serving with H.M. Forces.

If you know of anyone who failed to receive his or her copy of this issue, please ask them to make application to the head of their department.

Contributions and all communications should be addressed to the Editor at Shepherds Bush Station (Central Line), W. 12.

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War as an Educator

BY THE VICE-CHAIRMAN

I AM asked to write a message about this war. I am not any good at writing messages, but I can set down one or two thoughts that I have about the war as it affects us.

There have been people who have earned for themselves a great reputation for getting things done by waste. If you dare waste lives and supplies you can win a battle, but you cannot win a war. A nation can be persuaded to support such people with all its resources and the day of reckoning comes only later.

With the Transport Board our resources are always limited. We cannot spend more than we earn. We cannot have what we cannot afford. Our reputation must be built up with carefulness and thriftiness. This is especially so in war because it straitens our resources and diminishes our earnings.

Yet to maintain the reputation of the Transport Board for service and efficiency in despite of, even because of, the stringency of our means and the difficulties of the times is a great work which is put before us. To keep London fit and convenient to live in at all times and in all circumstances, which means keeping London free to move, is a considerable contribution towards the conduct of the war. To be prepared under adverse conditions to secure results of which we could be proud in peace is the achievement at which we must aim,

and I am sure that we shall all strive after its accomplishment to the utmost of our strength and the best of our ability.

And we can offer still more. We have resources of men, material and equipment which are not now fully employed. We can see that these, too, are applied to the greatest effect towards the purposes of war. We have already our own anti-aircraft regiment in the field.

We have an ambulance service for our London. We are undertaking training schools for army lorry drivers. We have seven thousand men already away on warlike duties. This is not the end. Everyone can look round and watch what there is to spare and make suggestions for its use. We shall hope to take up war tasks until we cannot fairly do anything more. We shall hope in good spirit, in generous temper, with diligent zeal, to carry out these tasks.

War can be a keen educator. We can learn from its disturbed experiences and extemporised provisions much that will assist us to turn our Transport Board to better account when peace returns.

All this is a hard saying. None the less, behind it goes all the encouragement which the Transport Board can give you, whether you are away at the war or at home but still at the war. I sincerely hope that we may come safely and successfully through our trial and that we may soon find ourselves

diverted to the labour of reconstructing a better Transport Board as our contribution to a better world. If all do well the work that comes to their hand, the accumulative result will be astonishing.



Frank Pick

Message to staff from Frank Pick, Vice Chairman titled "War as an Educator". This message asks all staff to do whatever they can to assist in the war effort. 'We can learn from its disturbed experiences. much that will assist us to turn our Transport Board to better account when peace returns.' He sincerely hopes 'that we may safely and successfully come through our trial'. November 1939. Archive ref num:

LT000030/018

Factory in the tunnels: Plessey Company Limited

Nearly 5 miles of new tube tunnel, intended for the Central line between Leytonstone and Gants Hill, were converted and equipped as an aircraft component factory for the Ministry of Aircraft Production.

The tunnels were used by the electronics manufacturer Plessey. Items assembled in the factory included wiring sets for Halifax and Lancaster bombers, field telephones, and Enigma Code-breaking “Bombes”. 4,000 people worked in the tunnels for the four years that it was in use.



Factory workers at Plessey wartime factory, Central line tunnels, Redbridge. 23 July 1941. Image courtesy of London Transport Museum 1998/36010

GLAD TO LEND A HAND

THREE hundred men and women of London Transport staff make aircraft parts and give up their spare time to do it. The plan originated in one department in June, when the whole of its staff was invited to do war work at the end of ordinary duties and 160 volunteered at once.

At first there was bench room for only 11, but the workshop was enlarged and enlarged again, three times in all, until it could accommodate 120, which is the nightly attendance.

The manufacture of the aircraft parts involves a variety of jobs and all of them are performed eagerly by the volunteers, who received a little training and quickly proved their competence.

Though one particular department fathered the scheme, offices of other London

Transport departments furnished many more volunteers, to whose notice the scheme was brought by Miss Forty. Altogether more than 1,000 hours a week are worked by the volunteers. These represent many grades, so that working side by side are signal linemen, painters, lorry drivers, labourers, lighting and telephone staff, draughtsmen, clerks and typists. Here you see some of them trimming electrical wire to specified lengths: many more work machines and shape metal parts.



London Passenger Transport Board volunteers working to make aircraft parts in their spare time. October 1942. Archive ref num: LT000030/078

LPTB volunteers work to make aircraft parts

Volunteers were also requested to support production of aircraft supplies.

Following an invitation to staff to do war work at the end of their duties, 160 volunteered at once. A photograph shows female volunteers sitting at a long bench trimming electrical wire to specified lengths.

Story compiled using information in records at the Transport for London Corporate Archives. The Corporate Archives seeks to preserve and make accessible records, not to interpret them. A wider range of material is available for physical consultation.

This story has been enhanced using some material from the London Transport Museum Collection. All enquiries regarding this material should be made directly to that institution.

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