



TfL Corporate Archives Research Guides

Research Guide No 28: London Buses in World War II

When Britain declared war on Germany on 3 September 1939, the London Passenger Transport Board (LPTB) was well-prepared for the looming conflict. Much work had already been done on air-raid precautions, first-aid, fire-fighting, decontamination and suchlike.

LPTB at that time operated the Underground, motor-buses in the Central and Country areas, Green Line coaches, trolleybuses, and tramways - which were in the course of replacement, principally by trolleybuses, when war broke out. In fact, the war gave the trams a stay of execution and they were to carry on for a further thirteen years. By the same token and due to the war, the trolleybus system did not develop south of the river as planned and, in time, was itself to succumb to the motor-bus.

Two days before the declaration of war, all Green Line coaches were withdrawn and over 400 of the fleet were converted into ambulances within five hours. All were transferred to the London area from their country garages. This had been planned since as early as July 1938. Buses and trolleybuses had their headlamps masked and interior lamps fitted with cowls. Other lamps – sidelights, destination blind lights etc – were removed completely. Conductors found it difficult to punch tickets correctly in the blackout and to distinguish between copper and silver coins when collecting fares.

Other precautions taken in due course included the covering of bus windows with protective netting to prevent injuries from splintering glass, with just a small diamond aperture in order to see out; the painting of bus mudguards white, where appropriate, and for the painting of a white circle at the rear to indicate primarily to trolleybus drivers that a motorbus was in front and it would be safe to overtake without risk of dewirement.

Immediately prior to the declaration a massive four-day evacuation of over half-a-million people – mostly children – was carried out, initially using buses for transporting them to railheads although in some cases buses were sent further afield. Expectant

mothers, blind persons, disabled children and hospital patients were dispersed to various locations and other hospitals well out of the danger area.

Trolleybus (and tram) overhead wires were particularly prone to damage from bombing and, in fact, the first bomb to have any effect on services fell in New Malden in August 1940, damaging the trolleybus wires. An unexploded bomb also disrupted the local service.

A limited number of Green Line coach services were reinstated from November 1939, followed by a number of others as vehicles were released. All of these terminated at three central London locations. A new numbering system was introduced for them using numbers between 2 and 59 that would not clash with existing Central Area bus routes. These services were withdrawn completely in September 1942 for the duration of the hostilities in order to conserve supplies of fuel etc.

With so many male staff away in the Armed Forces, LPTB began to recruit women as conductors on the buses and, for the first time, on Green Line coaches. They also worked on day-to-day bus maintenance at garages, did sundry other tasks and on occasions helped to shunt buses into position but were not permitted to drive in service. Many were from a number of different backgrounds.

Much effort was made in salvaging and re-using materials as shortages became more acute. Broken bus windows were replaced with wood, seat moquette was replaced with wooden slats, bus tickets were reduced in size, and paper pulp salvaged from used tickets and waste paper. Drivers were instructed to reduce wear and tear on their vehicles and to reduce speed over any section of damaged road to prevent vehicle damage. Between the peaks, permission was granted for buses to park up in Regent's Park and on Victoria Embankment and other central London locations instead of returning empty to their garages, in order to save fuel.

A short-lived bus service of sorts was introduced, at the request of the Government, between Westminster and North Woolwich in late 1940, using river boats serving the various factories and wharves in between. Fifteen boats and tugs were used, the Port of London Authority supplying the vessels, crews and stores whilst the LPTB supplied conductors and inspectors. The running time was over two hours, much slower than existing services, and being twice interrupted by mines in the Thames was withdrawn after six weeks.



From late 1940, there had been so many buses damaged that a request was passed to the Ministry of War Transport for buses to be hired in from provincial operators. Some 470 vehicles, both double and single deck, were received of many different makes and liveries from places as far afield as Exeter, Plymouth, Coventry, Leeds, Glasgow and Inverness. Bournemouth supplied a number of trolleybuses. Home losses from provincial towns and cities meant that many had to be returned within a year or so but later in the war LPTB were able to return the compliment by lending some 330 vehicles to various operators including some in Scotland.

Full introduction of the new 'RT' type buses from 1940 was delayed due to the fact that certain parts had to be obtained from German suppliers, resulting in many of these buses being stored at various outer-London locations during 1940/41. Some were used as guardrooms whilst in store.

There are some well-known incidents of buses being involved in major enemy action, including one at Balham in 1940 whereby a bomb penetrated the Underground station causing a crater into which a no. 88 bus fell (a 6-wheel LT type). Another bus ended up propped against the side of a house near Mornington Crescent whilst another was severely damaged in Portman Square, near Oxford Street. Several bus garages and some trolleybus depots were badly damaged by enemy action, the most serious being Croydon and Bull Yard, Peckham which involved many buses and coaches being damaged or destroyed. Bexleyheath trolleybus depot was hit in 1940 and Elmers End garage suffered a direct hit from a V1 'flying bomb' in 1944, involving several fatalities. Athol Street (Poplar) garage was hit several times. Even the Country Area was affected, with Hatfield garage being damaged, which involved some buses having to be kept in a yard at the de Havilland aircraft factory nearby (which may well have been the Luftwaffe's initial target). Uniquely, as a result of enemy action, ordinary road traffic was diverted on one occasion through a bus garage (Alperton), which occupies a corner site, while still in day-to-day use. From 1944, certain garages were damaged in rocket (V2) attacks.

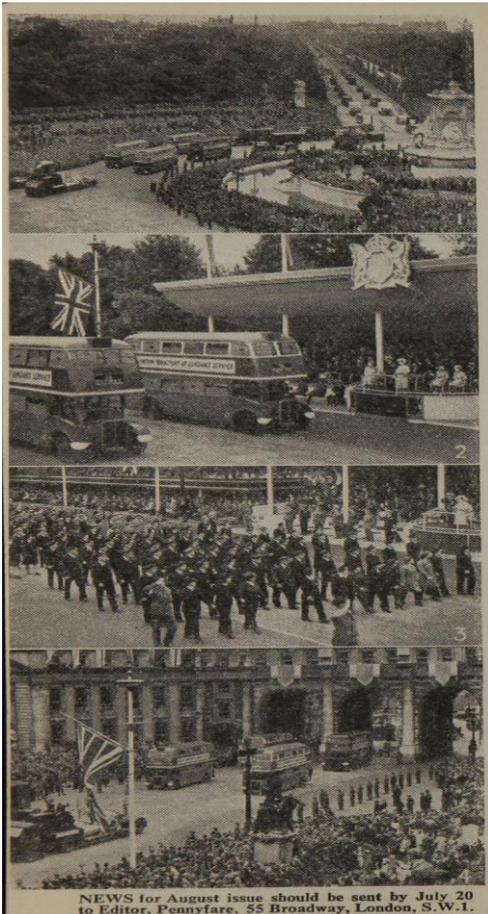
A total of 181 buses, coaches and trolleybuses were totally destroyed by the bombing although a number were repaired, with chassis being fitted with new or spare bodies. In an attempt to save fuel with the remaining petrol-engined buses, which were particularly fuel-thirsty, a number of ST and (single-deck) T-types were converted to operate on producer-gas. Each bus towed a small trailer containing a gas tank. The gas was produced by drawing air through hot anthracite coal or coke which was then piped through to the engine, which had to be specially modified. Performance was poor and the buses were generally restricted to the flatter routes, mostly in the Country area. Each required re-fuelling at the garage every 80 miles or so. The buses were converted back to conventional operation in the autumn of 1944.

A number of buses were repainted grey in an attempt at camouflaging them where they operated past sensitive locations, such as the aircraft factory at Brooklands, near Weybridge. Country route 410, which passed Biggin Hill airfield, was affected by the hostilities and for a time these buses carried an armed guard.

On the outbreak of war, the Ministry of Supply had halted bus production, as equipment and materials were better directed for war work, but in 1942 permission was given for chassis to be completed that had been started before the war. When completed, these buses, of various types, were known as “Unfrozen Buses”. With the need for more buses due to passenger demand and severe wartime losses, the Ministry had to agree to the construction of new vehicles but placed severe restrictions on their design, which affected provincial operators as well. No refinements whatsoever were permitted to these new ‘Austerity’ buses, such as aluminium or other metal of use to the war effort. Buses of Bristol, Guy and Daimler manufacture appeared on the London streets, in addition to batches within existing classes, many being fitted with un-upholstered leather-cloth or even wooden seats, with wartime exterior markings and masked headlamps etc. Many of these vehicles

lasted well into the 1950s before being sold off and often re-bodied or scrapped. Just one (a Guy) has survived into preservation. The war meant that many buses nearing the end of their serviceable life and dating from the late 1920s/early 30s had to be kept going long past their time for withdrawal.

A Victory Parade was held in The Mall in June 1946, attended by King George VI, Queen Elizabeth and other dignitaries and involved a ceremonial drive-past of two ‘RT’-type buses dressed in wartime garb and at least one of those lent by one of the provincial operators, almost certainly Leeds.



Files of interest in the Archives include the following:

Reference Number	Content
LT001192/005	Includes records of war-damaged trolleybuses (and trams) for May 1941; also a list of trolleybuses on loan from Bournemouth Corporation

Reference Number	Content
LT000798/010	Refers to the fact that 87 double-deck buses were earmarked for Home Guard duties (LPTB Battalions) over the whole of the Central Area including some trolleybus and tram depots
LT000798/001	Contains correspondence and war reports including the reduction in the number of bus stops; also road accidents
LT000798/013; LT000798/031	Includes letters to various transport undertakings which lent buses to LPTB during 1941 and the possibility of affixing a small plate therein commemorating the loan
LT000798/025; LT000798/028	Correspondence regarding loans of buses to provincial operators
LT000798/027	Correspondence in connection with authorities loaning buses to LPTB
LT000798/025; LT000798/026	Reports of trolleybus (and tram) accidents injuries and fatalities in 1943
LT000855/001	Contains a booklet outlining the activities on buses (and railways) during the war including emergency arrangements during the blitz and its effect on passenger transport. Also includes reports and photos of bomb damage
LT000014	Bus material including the use of women conductors
LT000600	Contains a register of bus and coach staff who served in the armed forces; also individuals who were not given permission to enlist, those exempt and those permitted to enlist in civil occupations. Also a list of casualties
LT000566/007	Details of special events including celebrations marking the end of World War 2