

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

The Experience of Sheltering in the Tube during WWII

What was it like to shelter in the tubes? Using original archival material and first hand accounts from the Transport for London collections, we bring you the story of the shelterers, both known and unknown....



Archive ref num: LT000503/036

In early September 1940, crowds gathered outside Liverpool Street underground station demanding to be let in to take shelter from the first bombings of what would become known as 'The Blitz'.

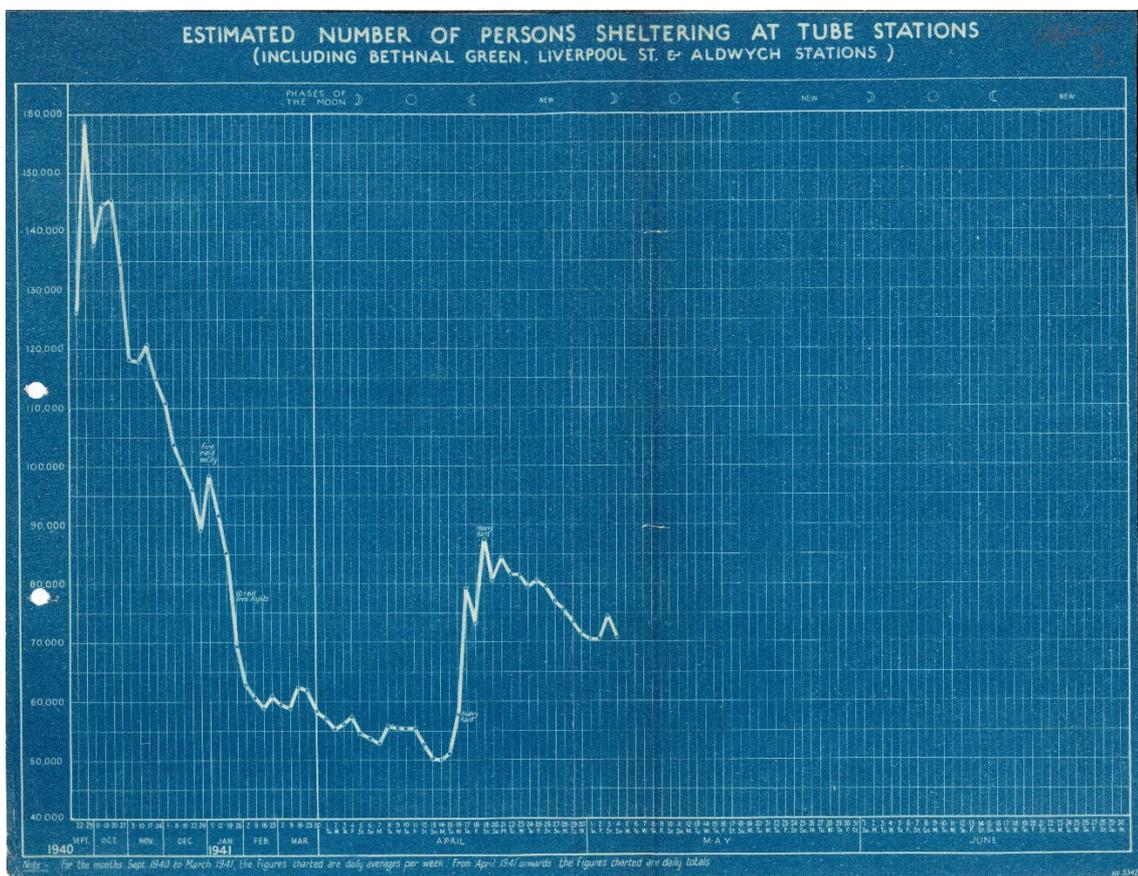
A 1924 Government directive had ruled out the use of stations as shelters in the event of air raids but Londoners had other ideas. Many bought tickets for

the tube and then simply refused to leave. During an oral history interview in 2017, Les Gaskin, a child shelterer in 1940, explained:

"We used to go down there to find somewhere to sleep....you had to buy a ticket...to get down there...they didn't want people on the Underground initially but if you bought a ticket that was it!"

This prompted the London Passenger Transport Board (LPTB) to take control.

Once the decision was made to formally admit shelterers, they came in their thousands. On the 21st September 1940 around 120,000 people were seeking refuge in London's underground stations. By October this had risen to 124,000, with 2,750 sheltering at King's Cross alone.

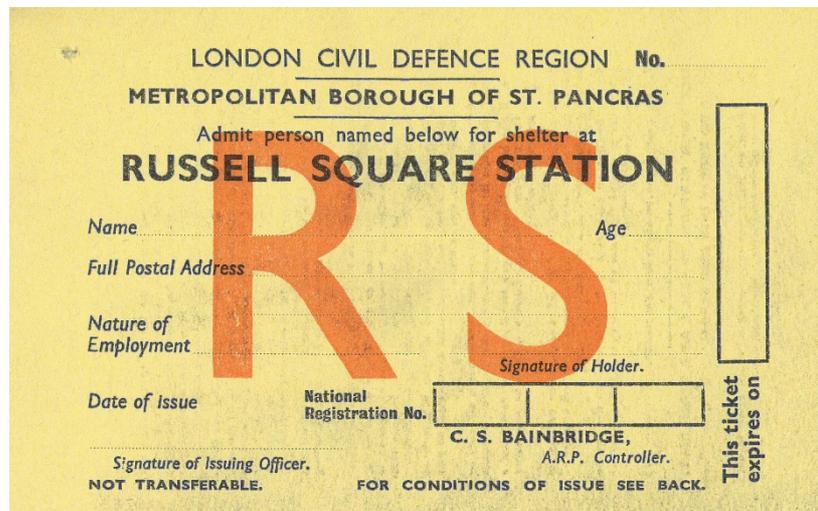


A graph showing the number of people sheltering in Tube stations and tunnels between Autumn 1940 and April 1941. Archive ref num: LT000074/006

Technically, it was the responsibility of each local authority to provide for the shelterers, in particular sanitary and cleaning arrangements, provision of first aid and medical posts, installation of bunks, prevention of disease, and appointment of marshals.

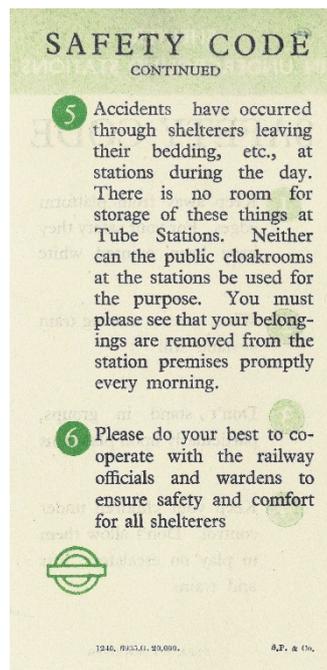
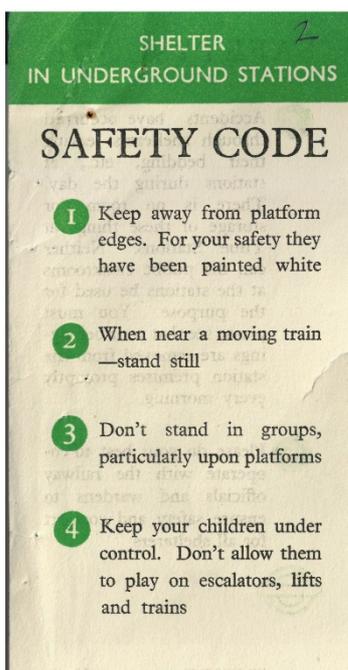
Yet by November 1940 it became clear to the LPTB that if thousands of people were to be entering their premises, staying overnight, and needing to be got out before tube services resumed in the morning, these responsibilities should be administered by them in conjunction with local authorities.

On 30th November 1940, Westminster City Council became the first local authority to introduce the issuing of shelter reservation tickets. Persons in verminous condition were refused entry or removed so as to limit infections.



Card allowing a named person to enter Russell Square for sheltering, and to occupy a particular allocated space, 1943. Archive ref num: LT001247/003

Safety below ground was a major concern for the LPTB and shelterers were constantly requested to comply with 'conditions of use'. Rules included: have your shelter ticket ready, arrive after 18:30; leave by 07:00; don't stand in groups; keep away from the platform edge; control children; take your rubbish home; and cooperate with staff.



A leaflet given to shelterers in Tube stations, highlighting safety issues, 1941. Archive ref num: LT00354/041

Les Gaskin's memories of sheltering on the

underground referenced the importance of the safety code:

"they didn't want the kids walking about because the trains were running...they'd start playing about on the escalators...there was one kid, one night, got his fingers caught in the belt..."

One unpleasant experience of sheltering underground was the presence of mosquitoes. By February 1941, "good progress" was being made on the delivery of sprays and compressors for aerial disinfection, with particular attention given to the elimination of mosquitoes.

One report in the collection noted that "spraying may be discontinued while the shelterers are sleeping but should recommence during the coughing period in the morning".

Paraffin Drives Them Out

Paraffin attacks on the mosquito's "airfields" have stopped nuisance raids by this winged enemy of Underground passengers and shelterers.

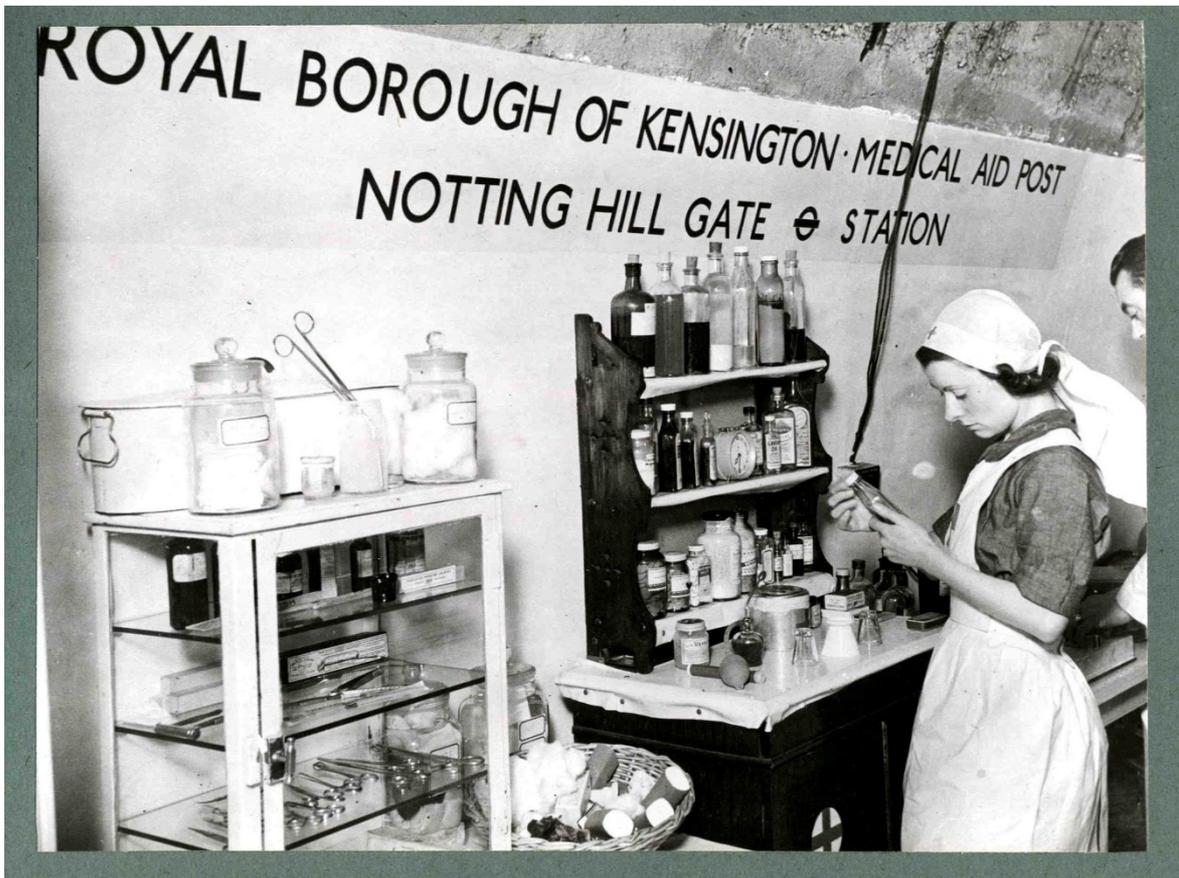
A CATCH of samples was identified as the *Culex pipiens* and the *Theobaldia annulata*. Despite their high-sounding names, these are just two of the 40 species in England, and (like all the others) they are harmless on clean bodies. They are not disease-carriers: they just bite—or rather the females (only the females) bite—and they like animals more than people. Skin irritation is the only result you can suffer and the only risk is when dirty fingers rub the skin.

Mosquitoes have been laying their larva on neglected pools outside the Underground system. But, with a flying range of 300 yards if the wind is in their favour, the newcomers find it easy to enter the tunnels. The best plan, therefore, and one London Transport follows, is to attack the puddles by a simple weapon: a drop of paraffin makes a film below which larva cannot breathe. Another remedy is carbolic: a weak solution poisons the larva.

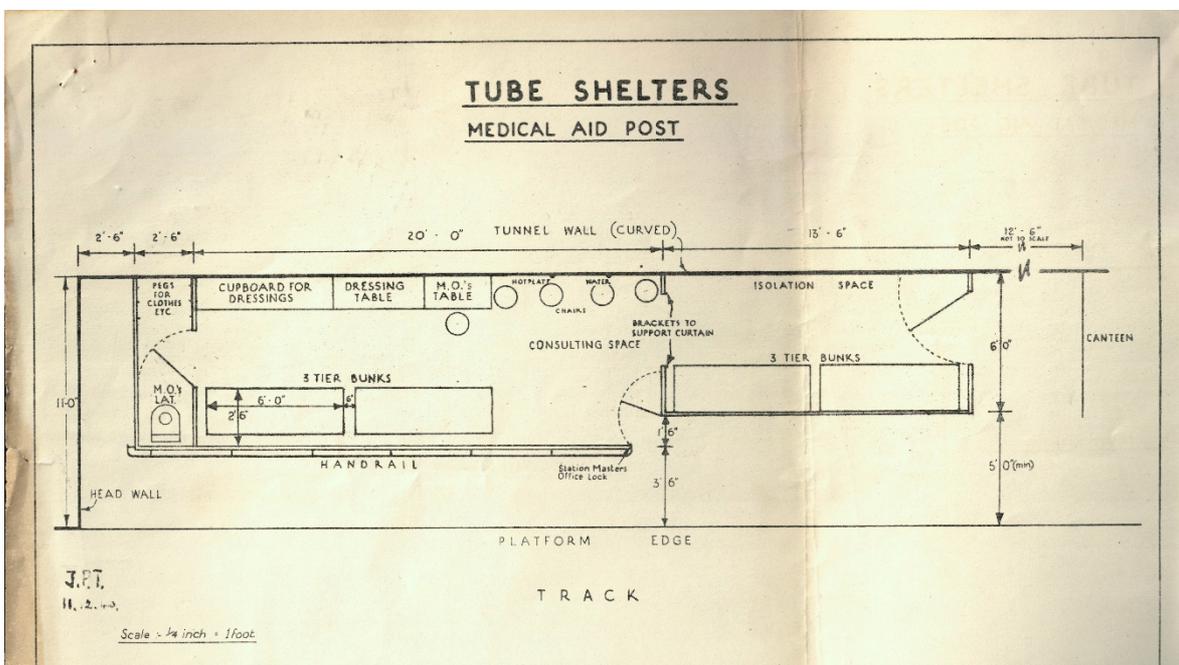
Larva appears from spring to autumn, but the prospective parents shelter in the warmest corners in the winter, and then the practice of London Transport is to "shoot" them with a spray of insect-killer.

Article from staff magazine, February 1941. Archive ref num: LT000030/078.

Concern over the well-being of the shelterers and the need to prevent the spread of infection led to the establishment of medical and first aid posts. The first of these opened at South Kensington station on 20 December. In total, 86 posts were established at a cost of £12,590 including equipment - over £710,000 in today's money.



Medical First Aid Post at Notting Hill Gate Station, 1943. Archive ref num: LT000503/036



Plan of lockable partitioned area to be sited at the end of a platform, with facilities including: consulting space, tables, cupboards, 2 3-tier bunk beds, lavatory, and isolation space, 1941. Archive ref num: LT000341/087

'Elsan' portable toilets were provided at shelters as well as more rudimentary buckets. But the ratio was never good - at Holborn for example there were just 4 elsans and 4 buckets for a station that could hold 4600 people.

24,000 bunks were installed at various stations, and particularly in newly built deep level shelters and sidings. If placed end to end they would have stretched for 27 miles.

Cigarette machines were installed at stations such as Clapham South, South Wimbledon, and Colliers Wood.

On 29th October 1940, the first refreshments service opened at Hyde Park station. By 11 November, 40-50 gallons of liquid were being sold nightly.

By 7th December 1940, 124 platform canteen points had been opened at 71 stations serving approximately 112,000 people.



Catering staff ready to serve refreshments, 1941. Archive ref num: LT000503/036

Yet it was still felt that more could be done and very quickly refreshment trains started making trips up and down the lines.



Tube Refreshments Special train. Image courtesy of London Transport Museum 1998/84948.

Not all refreshments were up to the shelterers' standards! A report from 1946 explains that a chemical reaction between tea leaves and the copper of the tea urns was causing a discolouration of tea and the shelterers' complained. The solution was to add a small portion of citric acid to the water.

- 12 -

7. MISCELLANEOUS.

(a) Discoloration of Tea - A most interesting investigation carried out by the Laboratory at the request of the Welfare Officer, arose in January 1941, following upon complaints made by the shelterers in the Tube stations regarding the objectionable colour of the tea sold to them. It was observed that initially the tea possessed a satisfactory colour, but that after a relatively short period and in many cases before it could be completely sold, discoloration occurred to a dirty-greyish-brown, or even black appearance. The investigation involved not only laboratory work but observations and experiments at Tube stations while tea-making was in actual progress.

The tea was being made in tinned copper urns, the milk being added direct to the urns immediately the tea was brewed. It was observed that no discoloration occurred if tea were withdrawn from the urn and then milked, but this easy solution of the problem was not feasible in practice.

It was found that the discoloration was due to oxidation in which the tin coating was acting as a catalyst; copper, exposed where the tin had been scratched during cleaning, was thought to have a slightly enhancing effect. The rate of oxidation was entirely controlled by the relatively minute acidity or alkalinity of the milked tea, and had it been possible to brew the tea with distilled water, no discoloration would have occurred. Tea made with tap water was found to be on the slightly acid side of neutral, at which the rate of oxidation was negligible. The addition of milk, by a rather complicated reaction, resulted in a faintly alkaline mixture, under which conditions the oxidation and consequent discoloration proceeded rapidly. The obvious solution was to render the mixture acid once more and this was possible by the addition of a very small amount of an inorganic acid (1/700th of a pint of hydrochloric acid per gallon of water used for tea making). It was considered more desirable, however, to employ a solid acid rather than a liquid and one also that was known to be used in culinary purposes. Citric acid was eventually chosen, the amount required being 0.039 ozs. per gallon of water. This additive, which we obtained in pellet form, entirely overcame the discoloration trouble and was without effect on the taste of the tea.

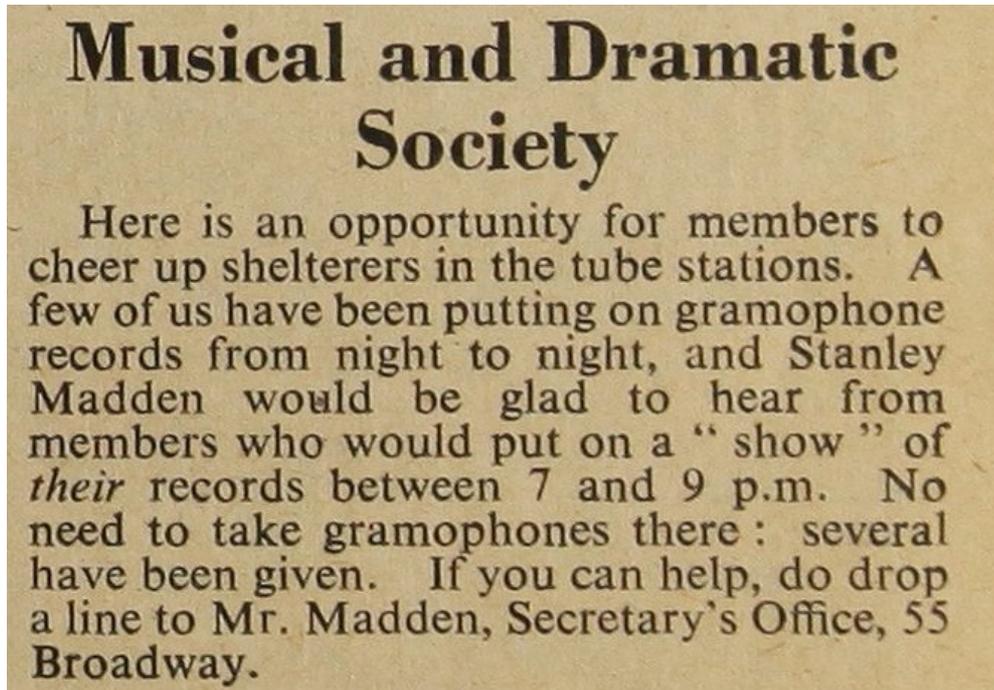
(b) Anti-Freeze Units - Two reports were prepared in connection with means for preventing freezing of outlet valves on compressed air brake system as fitted to rail cars, trolleybuses and 'RT' type buses, the theoretical aspect of the subject being considered in detail. Alternative anti-freeze liquids which would be expected to prove more efficient were suggested, while recirculation of the partially dehydrated air, which is at present exhausted to the atmosphere, was also proposed. Alternative means for removing moisture from the intake air were considered, one possibility being the use of silica gel as an absorbent. The reports were circulated to the departments concerned. It is of interest to observe that our conclusions respecting the anti-freezer unit were reached prior to the investigations into this subject carried out by Messrs. Clayton Dewandre, Ltd. and the Esso European Laboratories on behalf of the Ministry of Supply; both the concerns mentioned had consultations with us before they commenced their researches.

(c) Bridge Laying Tanks - Analyses and physical tests were carried out from time to time on behalf of the Permanent Way Engineer (Railways) in connection with the construction of bridge-laying tanks at Lillie Bridge Depot.

Report showing that a chemical reaction between the tea leaves and metal in the urns caused the problem, March 1946. Archive ref num: LT000257/011/004/006/005/001

The last refreshment was served on 3rd May 1945 - over the course of 4 and a half years 545,454 gallons of tea were served to thirsty Londoners beneath ground!

Where possible, entertainments were provided or encouraged for shelterers. People could bring gramophone records to play music.



Article from staff magazine, February 1941. Archive ref num: LT000030/078

In a 2018 interview with TfL Corporate Archives, tube shelterer Theresa Griffin recollected:

"Buskers come down...somebody might know a singer and they'd come down to entertain us..."

Generally, those sheltering tried to maintain their spirits - if only for the sake of the estimated 25,000 children who were in the stations nightly at the peak of the war. Some stations held children's parties,



Archive ref num: LT000503/036

part of Gloucester Road station was converted into a playground!

Celebrating Christmas

Theresa Griffin shared her memories of sheltering around Christmas time:

"There used to be a lot of 'Knees up Mother Brown' going on ... and drinking.... and Christmas time there's carol's and laughing and talking.... By the time we'd finished we didn't hear what was going on upstairs."

APPENDIX 8.

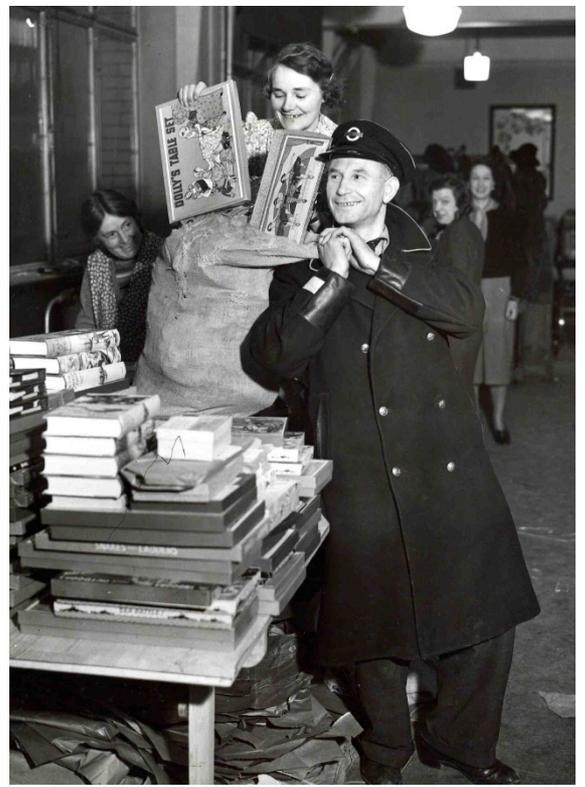
COST OF CHRISTMAS ENTERTAINMENTS FOR
TUBE SHELTERERS

		£.	s.	d.
1.	5 Amplifiers -- gift of American Committee for Air Raid Relief	1,250.	0.	0.
2.	<u>Cost of Electric Lighting Work</u> (To be included in the general work of lighting etc. on behalf of the shelterers)			
	36 Electric lighting fixtures	180.	0.	0.
	Lamps	101.	8.	3.
	Installation & dismantling	230.	0.	0.
	Transport	<u>3.</u>	<u>5.</u>	<u>3.</u>
		514.	13.	6.
3.	Board's contribution			
	* 100,000 Paper Hats	380.	12.	2.
	11,568 Toys	495.	6.	8.
	120 Christmas Trees	52.	1.	0.
	Stands	18.	0.	0.
	Holly & Heather Sprays	18.	6.	0.
	Contribution to Salvation Army	<u>25.</u>	<u>0.</u>	<u>0.</u>
		989.	5.	10.
	Total Cost of Entertainments	<u>£2,753.</u>	<u>19.</u>	<u>4.</u>

A note showing the cost of Christmas entertainment for Tube station shelterers, 1941. Archive ref num: LT000074/006



Staff decorating the Christmas tree on an Underground station, Fox Photos, 1941. The collection of London Transport Museum



Children's presents being packed before a party, 1944. Archive ref num: LT000503/036

But a war was still raging above and tragically some stations took hits from bombs, both indirect and direct.

On 12 October 1940, Trafalgar Square station was hit resulting in 7 fatalities to shelterers.

This image of the street view is from the London Transport Museum collections.



Image courtesy of the London Transport Museum, 1998/35407

The following night 19 people lost their lives as Bounds Green station was hit. Les Gaskin, a member of the public and the father of a TfL employee, answered TfL Corporate Archives campaign to capture World War Two memories of sheltering. He was at Bounds Green station the night it was hit:

"We got bedded down where we were near this entrance and next thing I remember is ... waking up and it was very dark and dusty.. luckily the emergency lights stayed on... noise and shouting and hollering... We were shoved up against a wall.

A lot of ARP people and police were holding people back so they could bring people who were injured off. I do remember my mother saying, don't look, don't look.' And then my dad came to find us and saying to my mum, "thank God you're here girl."

On 14th October, Balham station was flooded after a bomb fell above, 64 died. At Bank station on 11 January 1941, 53 people were killed when a bomb hit the booking hall.

Not all deaths were as a result of bombing - on 3rd March 1943, 173 people seeking shelter lost their lives at Bethnal Green after a woman tripping led to mass crushing. Other accidents included an individual falling against a train. Minor injuries were also a risk.

But in the midst of chaos and tragedy there was also life.

In the Cradle of the Deep Shelter

DOWN Lambeth Way Stationmaster J. W. Pickles logs strange event. Two births, girls, have occurred at next-door stations in the borough. One at Oval at 1 a.m. on February 25, one at Stockwell at 4.15 a.m. on March 11. Each mother was sheltering on the platforms.

Baby arrived in the station medical aid post and uttered her first cries 50 ft. below street level. The shelter doctor saw baby into the world and the post nursing staff proved their efficiency and gentleness.

The Oval baby lives at Kennington and has been named Constance Ellen. [We mention this only to anticipate the inevitable question, "Is she to be christened Ovaline?"] Mother has sheltered, with her little boys, in the station since August last.

She has asked *Pennyfare* to say how grateful she is to the M.O. and the nurses, so kind they were; to officials who looked after her two boys while she lay in hospital; and to the women porters who dressed them.

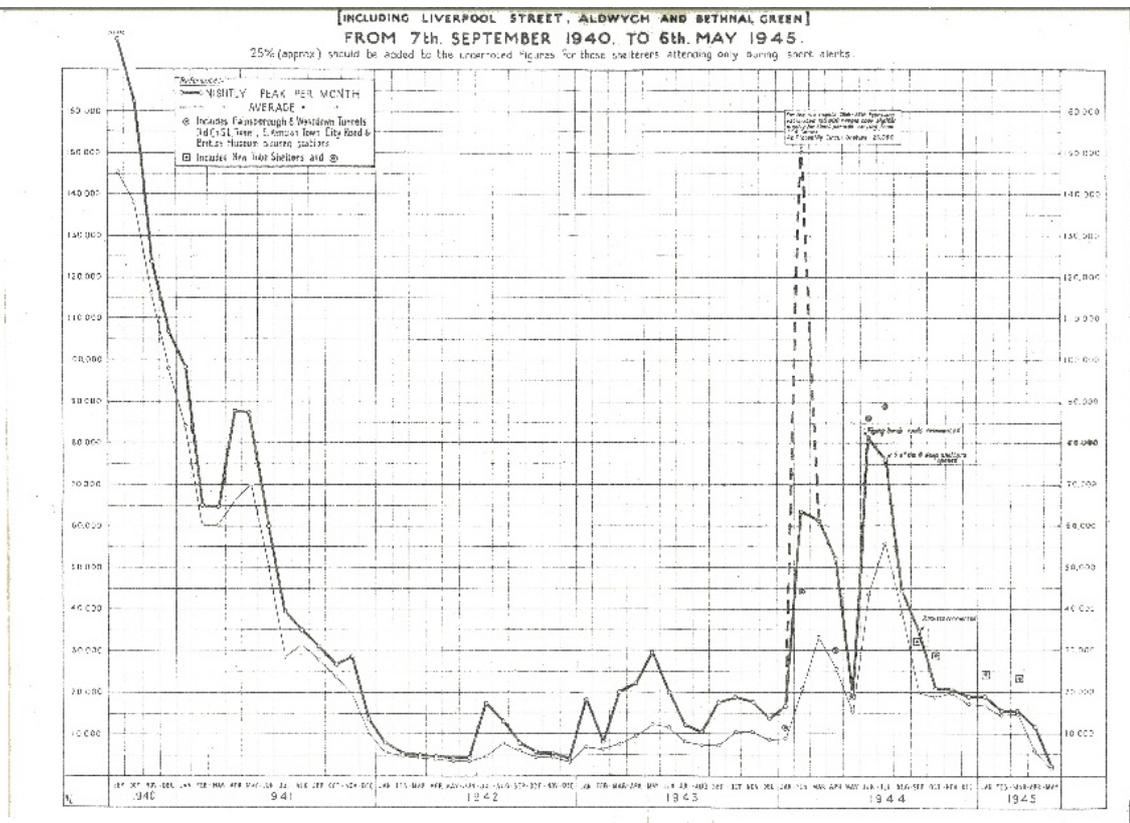


Article from the staff magazine, April 1941.
Archive ref num: LT000030/078

Archive ref num: LT000503/036

During the course of the war, an estimated 63,000,000 people took shelter in London's tube stations.

This graph shows the nightly average and peak numbers of people sheltering overnight in Tube stations and tunnels each month between September 1940 and May 1945.



Archive ref num LT000074/006

The last night of sheltering was on 6 May 1945. VE Day was about to be announced and only 344 people went below ground for the final time.

During the course of the war, an estimated 63,000,000 people took shelter in London's tube stations.

