

This category was previously titled 'Underground'. We have changed that to 'London Underground (inc loW stock)' for better focus. However, all listed items remain prefixed simply as 'Underground' as some don't actually fall within the London Transport time-frame per se. They have all worked on what was the LT system, though.

You may also like to look at the *EMUs* category for London Overground units and the *Standard Gauge Industrial* category, where there are a number of items there that could have 'Underground spin-offs'.

To assist you, we have listed the items in the running order as:

- **Sub-surface**
Stock which was designed to run on the Metropolitan, Circle, Hammersmith & City, District and East London Lines. The tunnels can take full-sized rolling stock and are usually just below the surface. The Met, Circle and H&C lines through King's Cross (Met) station are twin single line.
- **Tube Stock**
Stock which was designed to run on the Bakerloo, Piccadilly, Northern, Jubilee, Central and Victoria Lines through the smaller diameter deep-level tunnels. Some *Tube Stock* ran on the East London Line in later years. That line has twin single line tunnels under the Thames. You will find the loW Classes 483, 485 and 486 in this section.
- **Underground Steam Locos**
In date order.
- **Underground Hauled Coaches**
In date order.
- **Underground Battery and/or Diesel Locos**
In date order.

It is impossible for us to take into account the vast array of variations within types over the years such as cabs at one end or both as well as liveries. The manufacturers will 'get as much as they can' from any model via the use of slip tools and so on. It seems to make commercial sense for them to produce models which span a number of decades and which appeal to a wide audience.

Although we make reference to links in the text, you will find greater detail in these books and websites:

- *1935 Experimental Tube Stock*. Brian Hardy & Piers Connor. LURS.
- *London Underground Tube Stock*. J Graeme Bruce. Ian Allan.
- *London Underground Rolling Stock*. Brian Hardy. Capital Transport.
- *Metropolitan Railway Rolling Stock*. James R. Snowdon. Wild Swan Publications.
- *Red Panniers*. John Scott-Morgan & Kirk Martin. Lightmoor Press.
- *Underground Overground*. Article by Richard Foster in *ModelRail* June 2013
- *Underground Standard Tube Stock 1945 onwards*. Brian Hardy. LURS.
- *Underground Train File. Surface Stock, 1935-1959*. Brian Hardy. Capital Transport.
- *Underground Train File. Tube Stock, 1933-1959*. Brian Hardy. Capital Transport.
- A general link: <http://www.trainweb.org/tubep prune/Rolling%20Stock.htm>
- London Underground Railway Society: <http://www.lurs.org.uk/>
- Photos of many locos etc: Colour Rail www.colour-rail.com or Rail Photoprints www.railphotoprints.zenfolio.com
- Links to kit makers etc: The Model Shop Directory <http://www.ukmodelshops.co.uk/counties/manufacturersDesc>

The links above and within **The Guide** have been provided as supplementary information. Care has been taken to ensure that they are *bona fide* and working, but please understand that such things can 'fail'.

The **Summary** below is in exactly the same order as **The Guide** detail which follows. It can be printed out and used as a 'pre-planner' for voting in The Poll. This will help you avoid getting 'timed out'. If you need unbiased help or advice, please email: thepollteam@gmail.com

* Item new to The Poll this year.

Underground Sub-surface Stock (alphabetical)

Underground A Stock (A60/A62)
Underground C Stock (C69/C77)
Underground D Stock (D78)
Underground F Stock (1920)

Underground O & P Stock + Q38 Stock + R Stock (1938-1959)
Underground Q Stock (1923/27/31/35 types, formerly G, K, L, M & N Stocks)
Underground T Stock (inc MV Stock & MW Hauled Stock, of 1925/27/31)

Underground Tube Stock (by year)

Underground Pre-1938 Standard Stock (inc loW Classes 485/486)
Underground 1935 Flat front/1938 Stock (inc loW Class 483)
Underground 1940 Waterloo & City Stock (later Class 487) (inc Match Trucks for transport to BR Works)*
Underground 1956/59/62 Stock
Underground 1967 Stock/1972 MkI & MkII Stock
Underground 1973 Stock
Underground 1992 Stock (inc NSE livery variant for Waterloo & City Line)
Underground 1995/96 Stock
Underground 2009 Stock

Underground Steam Locos (by year)

Underground Steam Loco – Metropolitan A Class 4-4-0T (1866)
Underground Steam Loco – Metropolitan S Class 0-6-0ST Peckett (1897)*
Underground Steam Loco – Metropolitan E Class 0-4-4T (1896)
Underground Steam Loco – Metropolitan F Class 0-6-2T (1901)*
Underground Steam Loco – Metropolitan K Class 2-6-4T (1925)*

Underground Hauled Coaches (by year)

Underground Hauled Coaches – Metropolitan 'Ashbury/Chesham' (1898/1900)*
Underground Hauled Coaches – Metropolitan 'Dreadnought' (1910)

Underground Battery and/or Diesel Locos (by year)

Underground Battery Locos (1938-1973)
Underground Battery Locos (1985/86)
Underground Diesel/Battery Locos – Schöma (1996)

Underground Sub-surface Stock (alphabetical)

Underground A Stock (A60/A62)

The stock was introduced in 1961 and 1963, and known as A60 and A62 Stock respectively. Delivered in unpainted aluminium and eventually refurbished and painted in LUL's white, blue and red liveries. A few units were also used for livery experiments before the definitive LUL livery was settled upon. Used only on the Metropolitan Line to Amersham, Chesham and Watford and on the East London Line, the latter in 4-car sets. In their early days, they ran off-peak on the Metropolitan Line in 4-car sets. The last units were withdrawn in 2012.

Link: <http://www.flickr.com/photos/robertcwp/7148067509/in/set-72157604081484859>

Link: <http://i.ytimg.com/vi/11vXaqSogks/maxresdefault.jpg>

Underground C Stock (C69/C77)

These trains comprised three 2-car units. They were built in two batches: C69 was delivered in 1970/1 for the Hammersmith & City and Circle Lines; and C77 for the Edgware Road-Wimbledon service, although both types were interchangeable in service. Final withdrawal took place in 2014.

Link: <http://www.flickr.com/photos/robertcwp/7001979900/in/set-72157604081484859>

Link: <http://www.flickr.com/photos/coachalex1996/9757802153/in/pool-730676@N23>

Underground D Stock (D78)

This District Line stock entered service in 1980. Each train comprised two 3-car units, most of which had a cab at one end of each unit, although there were also twenty 3-car units with a cab at each end. Some of these worked singly on the East London Line for a few years. They have now been withdrawn from service. Some are being converted by Vivarail to become DMUs. If you wish to vote for those, please see Class 230 in the *Railbuses, Railcars & DMUs* category.

Link: <http://www.flickr.com/photos/lcliffie1/9843626274/in/set-72157628718527923>

Link: <http://www.flickr.com/photos/21611052@N02/4922340155/in/set-72157624791392840/>

Underground F Stock (1920)

Introduced in 1920, there were only two livery variations but they ran until 1961 on the District and – from around 1951 – to 1963 on the Metropolitan and East London Line. (The transfer took place in connection with the introduction of R Stock on the District Line and the transfer of some P Stock from the Met to the Circle, with the F Stock plugging the gap on the Met as well as allowing old stock on the ELL to be

replaced.)

Three body moulds required (double-ended DM, single ended DM, and Trailer). Driving cab ends almost identical to trailer ends but with extra lights and fittings – distinctive elliptical end windows on all cars. Only able to operate within class giving nice uniform trains.

Link: <http://www.flickr.com/photos/lcliffie/6793553060/>

Link: <http://www.trainweb.org/tubeprune/F%20Stock%20FWI.htm>

Underground O & P Stock + Q38 Stock + R Stock (1938-1959)

The O and P Stock and Q38 Stock were visually similar and distinctive with their flared body panels. The R Stock was again very similar, but was built or converted in batches (R38, R47, R49 and R59). Only the R Stock survived in service beyond 1981 (even then only to 1983), the last Q Stock having gone in 1971. O and P Stocks had their electrical equipment replaced and became CO and CP, often referred to as COP Stock.

If a manufacturer started with tools for O, P and Q38 Stock, they could later add variations to model the R Stock (only one extra body tool needed for the majority of that stock), giving more livery variations as well. Possible liveries are:

- Train red (all types)
- Bus red (CO/CP stock)
- Unpainted aluminium, painted silver or grey or white (R stock). The silver variety included a version with red waistbands on at least two complete trains.

Link: <http://www.flickr.com/photos/rgadsdon/7942351942/>

Link: <http://www.flickr.com/photos/robertcwp/2321677222/in/set-72157604081484859>

Link: <http://www.flickr.com/photos/robertcwp/7170881850/in/set-72157604081484859>

Link: <https://flic.kr/p/92Pmfb>

Underground Q Stock (1923/27/31/35 types, formerly G, K, L, M & N Stocks)

This stock was characteristic with ‘American styling’ with very straight sides and clerestory roofs. They often ran in mixed formations with Q38 Stock. The last trains ran in 1971 on the East London Line.

Link: <http://www.flickr.com/photos/robertcwp/8562227493/in/set-72157604081484859>

Link: <http://www.flickr.com/photos/rgadsdon/7942352020/>

Underground T Stock (inc MV Stock and MW Hauled Stock, of 1925/27/31)

T Stock ran on the Metropolitan ‘main line’ to Rickmansworth and Watford Met, and later to Amersham after that was electrified. Many of the trailer cars were converted loco-hauled stock with control cabling added and braking modifications to suit EMU style operation, but some were built new to the same design. Originally there were two main variants that became T Stock:

- MV Stock with vacuum brakes and side buffers, allowing steam haulage beyond Rickmansworth
- MW Stock with Westinghouse air brakes. Note that there were panelled and unpanelled versions, meaning more body tools being needed for any potential models.

Withdrawal occurred in 1961 and 1962, with the A60/A62 stock taking over.

Link: <http://www.trainweb.org/tubeprune/Tstock%20at%20NVd.jpg>

Link: http://mikemorant.smugmug.com/Trains-Railways-British-Isles/Miscellaneous/LT-railways/23497415_L9hTp7#!i=1983022488&k=PtNwKMZ

Underground Tube Stock (by year)

Underground Pre-1938 Standard Stock (inc loW Classes 485/486)

These were distinctive in having clerestory roofs and the first third of the driving cars given over to traction motor etc accommodation, with the frames and bodywork swept up over the front bogie. Although known as ‘Standard Stock’, they were anything but, with several variations from 1922 to 1934. Similar looking but some had divided doorways, different clerestory roof and vent treatments and even different curvature to the lower side tumblehomes. Used on Northern, Piccadilly and Central Lines, also on the Bakerloo. Fifty-eight trailers were adapted to work in 1938 trains on the Northern (until 1941) and Bakerloo Lines. Withdrawn from LT in the early to mid-1960s. BR bought some for use on the Isle of Wight from 1966/7 onwards as classes 485 and 486 (4 VEC and 3 TIS or 5 VEC and 2 TIS units at various times). Liveries include:

- Pre-LT
- LT train red with or without cream windows
- BR blue
- BR blue with grey doors
- BR blue and grey
- Network SouthEast

BR loW stock was withdrawn in 1989.

Link: http://www.semgonline.com/gallery/class485_486_01.html

Link: <http://www.flickr.com/photos/robertcwp/5272414694/>

Underground 1935 Flat front/1938 Stock (inc loW Class 483)

Used on Northern, Piccadilly and Bakerloo Lines. Liveries include:

- LT train red with or without cream window pillars
- LT bus red
- NSE
- 'Dinosaur'
- loW LT red with yellow panels.

Could also allow for the 1935 flat-fronted prototypes to be modelled – these had minor variations around the cab fronts and cab doors. All withdrawn by 1985, but a few trains were heavily overhauled and returned to service in 1986. The last was withdrawn in 1988. A pair of cars was converted for use as a weed-killing train. Seen as an 'icon' of LT trains, one unit has been preserved and is in regular use on special trains. Airfix/GMR proposed a model in the early 1980s; a pre-production mock-up exists.

Link: <http://www.flickr.com/photos/robertcwp/3276650251/>

Link: <http://www.flickr.com/photos/24772733@N05/2643379146/in/set-72157606550541715>

Link: http://www.semgonline.com/gallery/class483_01.html

Link: <http://railphotoprints.zenfolio.com/p683721011/he151a8d#hf863eff>

Underground 1940 Waterloo & City Stock (later Class 487) (inc Match Trucks for transport to BR Works)*

Ordered and designed in 1938 by the Southern Railway from English Electric to coincide with the modernisation of the Waterloo & City Line, these trains entered service from 1940, plying between the only two stations on the line. There were two types of vehicle:

- Double-ended Driving Motor (DM) cars
- Trailers (T).

DMs were capable of running alone but this was rare; the most common formation was 5-car sets of DM+T+T+T+DM, but off-peak DM+DM formations were fairly common too. Each car had air operated sliding passenger doors, but DMs also had hinged doors for access to the cabs.

Routine maintenance was carried out in the underground depot at Waterloo, but for major repairs, refurbishments or overhauls, the stock was raised to the surface at Waterloo and hauled to the works at Lancing, Wimbledon, Selhurst, or Eastleigh, singly or in pairs between the Match Trucks.

These trains are probably the only BR stock never to receive yellow ends; the car ends remained unpainted aluminium when in SR Green, BR(SR) Green, and BR Blue, and were painted white when in Network SouthEast livery. All were replaced from the 1993 line refurbishment, when new stock was delivered (see Underground 1992 Stock further below).

Link: <http://www.semgonline.com/gallery/class487.html>

Link: <https://flic.kr/p/c1Qh1L>

Link: <https://flic.kr/p/7xMG6a>

Underground 1956/59/62 Stock

The 1956 stock were prototypes. The 1959 stock were initially 7-car trains for the Piccadilly Line and 8-car trains for the Central Line. The last run of the 1959 stock was in January 2000 (the last day of operation on LT with train guards). Body shells are almost identical to the 1935/38 stocks but with squarer roof lines at the cab end and different cab front details. Unpainted aluminium livery followed by London Underground Limited's smart white livery with blue relief and red cab ends and doors. There is one 7-car set in 'heritage' 2-tone red plus cream livery.

Link: <http://www.flickr.com/photos/robertcwp/4935338363/>

Link: <http://www.flickr.com/photos/metromadme/8688585700/in/set-72157633315125876/>

Underground 1967 Stock/1972 MkI & MkII Stock

The 1967 Stock was the renowned Victoria Line stock, made of aluminium alloy and having the distinctive wrap-around cab windows and headlights. They were replaced by 2009 Stock, with the final withdrawals taking place in 2011. One 4-car set ran for some years on the Central Line Woodford-Hainault shuttle.

The 1972 MkI Stock was to the 1967 design but 7-car rather than 8-car and adapted for crew working. They were used initially on the Northern Line. Some MkI Stock was converted for use on the Victoria and Bakerloo Lines. This stock had red doors and originally ran on the Northern Line prior to the Jubilee Line but is now on the Bakerloo.

Link: <http://www.flickr.com/photos/21611052@N02/6584289205/>

Link: <http://www.flickr.com/photos/robertcwp/11609060395/in/set-72157604081484859>

Link: <http://www.flickr.com/photos/robertcwp/7319540372/in/set-72157604081484859>

Link: <http://www.flickr.com/photos/24772733@N05/2451996228/in/set-7215760440112037>

Underground 1973 Stock

These trains run on the Piccadilly Line. Each car is approximately 6ft longer than previous stocks and trains run as 6-car sets. Passenger accommodation includes a 'stand back' area adjacent to each door to allow for luggage.

Link: <http://www.flickr.com/photos/robertcwp/7001979034/in/set-72157604081484859>

Link: http://www.flickr.com/photos/chris_adams/3671017175/in/set-72157614111764004

Underground 1992 Stock (inc NSE livery variant for Waterloo & City Line)

These 8-car trains were built for the Central Line and delivered between 1992 and 1995 with 20 cars for Waterloo & City Line in 4-car sets (at that time under the wing of Network SouthEast). The doors were hung externally.

Link: https://www.whatdotheyknow.com/request/66598/response/170252/attach/html/4/foiextract20120920-3569-ufwud0-0-8_.l.jpg

Link: <http://citytransport.info/Digi/PI160622a.jpg>

Underground 1995/96 Stock

The 6-car trains of 1995 Stock were for the Northern Line, but were beaten into service by the very similar 1996 Stock for the Jubilee Line. The latter were augmented with an extra car in late 2005.

Link: <http://www.flickr.com/photos/21611052@N02/8641074898/in/set-72157623478827032/>

Underground 2009 Stock

These are the replacement trains for the Victoria Line.

Link: https://c1.staticflickr.com/5/4144/4840773693_e1a4878fc0_z.jpg

Underground Steam Locos (by year)

Underground Steam Loco – Metropolitan A Class 4-4-0T (1866)

A once numerous class and the mainstay of Met services before electrification. Five became LT property and one (Met No.23) lasted long enough to be renumbered L45. As No.23 it worked on the Brill branch until closure in November 1935. L45 was withdrawn in 1948 and, as Met 23, is preserved at the London Transport Museum.

Link: <http://www.flickr.com/photos/rgadsdon/5489524329/> (Note the F Stock in the background)

Link: http://mikemorant.smugmug.com/Trains-Railways-British-Isles/Miscellaneous/LT-railways/23497415_L9hTp7#i=1982998140&k=zLDdfR9

Link: <http://www.shapeways.com/product/LZF9PHSV2/metropolitan-railway-a-class?optionId=43571082>

Underground Steam Loco – Metropolitan S Class 0-6-0ST Peckett (1897)*

Built in 1897 and 1899, numbered 101 and 102, later L53 and L54 in LT days. They were withdrawn 1960 and 1961. These locos were variously used at Neasden, Finchley Road or Harrow as shunters for most of their lives.

Link: <https://transportsofdelight.smugmug.com/RAILWAYS/RALWAYS-EXCLUDED-FROM-THE-1923-GROUPING/RAILWAYS-EXCLUDED-FROM-THE-1923-GROUPING/i-jbw5SqZ/A>

Link: <http://picsr.com/search/london+transport+I53>

Underground Steam Loco – Metropolitan E Class 0-4-4T (1896)

A class of seven locos built 1896-1901, numbers 1 and 77-82. Four survived to be renumbered by LT: Nos. 1, 77, 80 and 81 became L44 and L46 to L48 respectively. L47 was withdrawn in 1941 but the remaining three lasted until 1963 and 1964. L44 as Metropolitan No. 1 is preserved at the Buckinghamshire Railway Centre (but, in 2018, was on loan to the Epping and Ongar Railway).

Link: <http://www.flickr.com/photos/52834510@N00/9447604802/>

Link: http://mikemorant.smugmug.com/Trains-Railways-British-Isles/Miscellaneous/LT-railways/23497415_L9hTp7#i=1983011873&k=v2Q74Nw

Underground Steam Loco – Metropolitan F Class 0-6-2T (1901)*

These four locos were delivered in 1901 from the Yorkshire Engine Company for freight work, thus were not fitted for steam heating. They were based on the earlier E class, and numbered 90 to 93, later L49 to L52 in LT days. They were withdrawn in 1957 and 1958 except L52 which lasted until 1964.

Link: <https://southharrowthenandnow.co.uk/making-gas.htm> (about two-thirds down page)

Link: <https://mikemorant.smugmug.com/Trains-Railways-British-Isles/LT-railways/LT-railways-Metropolitan-steam/i-XZz2LT2>

Underground Steam Loco – Metropolitan K Class 2-6-4T (1925)*

These handsome tank locos were the last engines built for the Metropolitan Railway. Designed by George Hally, a total of six was built in 1925 by Armstrong Whitworth & Co from parts originating at the Woolwich Arsenal, which were to Maunsell's N Class 2-6-0 pattern.

In 1937, many former Metropolitan locos were sold to the LNER, which operated the remaining steam services north of Rickmansworth, with the K class becoming its L2 class. They were slightly too wide and

this resulted in at least one recorded platform-scraping, and they were prohibited from working in the tunnels beyond Finchley Road. For most of their life, they hauled freight and performed shunting duties between Verney Junction and Finchley Road. In 1938 and 1942 they were often used on passenger services in place of unavailable H2 class locos. Withdrawals started in 1943 with the last two being withdrawn before the end of 1948. None received British Railways numbers.

Link: <https://www.lner.info/locos/L/I2.php>

Link: <http://www.railwayarchive.org.uk/Lpages/html/L2592.html>

Link: <https://transportsofdelight.smugmug.com/RAILWAYS/RALWAYS-EXCLUDED-FROM-THE-1923-GROUPING/RAILWAYS-EXCLUDED-FROM-THE-1923-GROUPING/i-hBWz3Sk>

Underground Hauled Coaches (by year)

Underground Hauled Coaches – Metropolitan ‘Ashbury/Chesham’ (1898/1900)*

Built in 1898 by the Ashbury Railway Carriage and Iron Co of Manchester, these 42ft long compartment coaches were formed into sets of six. They had electric lighting driven by a dynamo. They were used for what the Metropolitan deemed ‘long distance services’. Many were later converted into electric multiple units and used on the Uxbridge and Stanmore branches; they lasted until WWII in that form. Six vehicles were converted back to steam haulage for push-pull work on the Chesham branch, as two 3-car sets, most of which have been preserved after their withdrawal in 1960.

Link: <http://www.bluebell-railway.co.uk/bluebell/bash/hist.html>

Underground Hauled Coaches – Metropolitan ‘Dreadnought’ (1910)

Distinctive hauled stock with round top doors. Essential to run with Heljan’s Bo-Bo loco, ‘Sarah Siddons’. Brake coaches had third and fourth rail shoes fitted on the end bogie to assist the Bo-Bo electrics with continuity over breaks in current rails.

Link: <http://www.flickr.com/photos/rgadsdon/8482641939/in/set-72157628964403227>

Link: http://shed83a.smugmug.com/CoachingStock/Metropolitan/18542818_PKJqDt#:i=1431629650&k=bMm4Cb5&lb=1&s=A

Underground Battery and/or Diesel Locos (by year)

Underground Battery Locos (1938-1973)

This group includes a number of types of similar appearance, used mainly on engineering trains.

- L35-43. Built 1938. L41-43 had Metadyne equipment. They were scrapped 1979/80. L35 preserved.
- L55-61. Built 1951/2 and had more batteries fitted than earlier batches.
- L76. Built in 1962 and renumbered L33 in 1974. She was similar to L55-61.
- L20-32. Built in 1964. Still in service.
- L15-19. Built in 1969. Still in service.
- L44-54. Built 1973 by BREL. Still in service.

Link: https://upload.wikimedia.org/wikipedia/commons/b/b0/Battery_loco_16_at_West_Ham.JPG

Link: https://upload.wikimedia.org/wikipedia/commons/5/58/LT_battery_locos_at_Croxley_Tip_1971.jpg

Link: <http://www.digitalsurveys.co.uk/uploaded/70df22ab7e7ede6cadb6942bcd777b5.jpg>

Link: <http://www.theaylesburynews.com/images/Battery%20loco%2035.jpg>

Underground Battery Locos (1985/6)

These six were built in 1985/6 and have been scrapped. They were used mainly on engineering trains. The running numbers were: L62-67.

Link: <http://80srail.zenfolio.com/p765534975/h3A2600E2#h3a2600e2>

Link: <http://www.flickr.com/photos/robertcwp/7319540564/in/set-72157604081484859>

Underground Diesel/Battery Locos – Schöma (1996)

In 1996, diesel hydraulics numbered 1-14 were supplied by Schöma of Germany, entering service from February that year. Originally used during the construction of the Jubilee line tunnels, they were fitted with exhaust scrubbers for use in the tunnels. Weighing 33.88 tonnes each, they have 500-horsepower (370 kW) 6-cylinder inline diesel engines, with a maximum speed of 31mph (50 kph), and often used in pairs, ‘top and tailing’ works trains. They are built to tube tunnel loading gauge, and had buckeye couplers fitted when built. They are usually based at Ruislip or Lillie Bridge depots. They all carry female names (from Jubilee Line Extension Works Managers’ Secretaries). They are now with London Underground Transplant, and some have had different couplers fitted. Converted to battery operation by Clayton Equipment (confirmed by the company’s website) and ten have been converted. Only the four unconverted diesels remain in use. CONFIRM

Link: https://c2.staticflickr.com/4/3640/3365368001_a54495bd74_b.jpg

Link: https://c2.staticflickr.com/4/3859/15186383229_7508d0f984_b.jpg

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