

RSMG

28 January 2021

A decorative graphic at the bottom of the page consists of several overlapping, wavy lines in shades of orange, teal, and blue. These lines are composed of fine, parallel stripes. Three solid-colored circles (orange, red, and blue) are placed at various points along these lines, creating a sense of movement and data points.

Estimates of Station Usage 2019–20

Jay Symonds

28 January 2021

Estimates of station usage



Estimates of Station Usage 2019-20

1 December 2020



Background:

This annual statistical release contains estimates of the total number of people:

- travelling from or to each station in Great Britain (entries and exits), and
- changing trains at each station (interchanges)

Estimates of station usage are derived from LENNON, the rail industry's ticketing and revenue system, together with some local ticketing data. A number of adjustments are made to the source data to make the estimates as accurate as possible.

In Great Britain, **2,567 stations** were served by mainline rail services as at 31 March 2020.

The statistics in this release cover the period before and immediately following the government's announcement of measures to limit the impact and transmission of the coronavirus (COVID-19) pandemic in mid-March. [Rail passenger journeys decreased](#) following announcements advising against all unnecessary travel. Some high level analysis of the impact of COVID-19 on station usage in 2019-20 can be found on page 9 of this release.

Busiest and least used stations

The busiest station in 2019-20 was **London Waterloo** with an estimated **86.9 million entries and exits**. This was 7.3 million less than the previous year due to the impact of strike action and COVID-19. This has been the most used station for the last 16 years.

Top 10 stations in Great Britain	Total entries & exits 19-20
London Waterloo	86,903,518
London Victoria	73,559,158
London Liverpool Street	65,984,786
London Bridge	63,095,300
Birmingham New Street	46,510,526
London Paddington	44,871,096
London Euston	44,776,804
Stratford (London)	41,912,114
London St Pancras Intl.	36,040,080
London Kings Cross	32,532,404

ORR @railandroad · Dec 1
Our station usage stats for 2019-20 are now live.

[dataportal.orr.gov.uk/statistics/usa...](#)

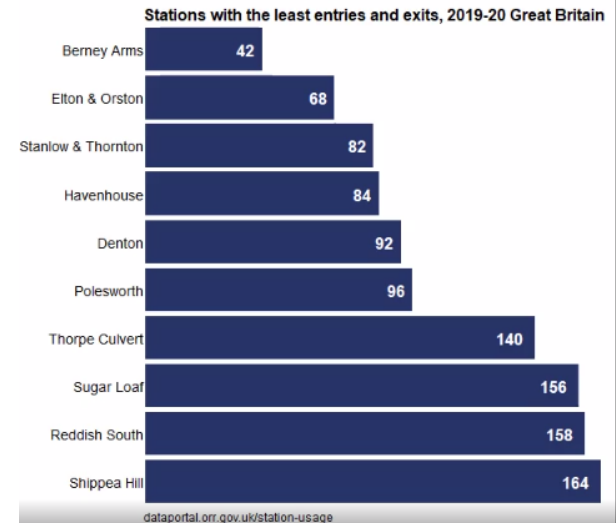
Here's Jay, ORR's senior statistical analyst, with some of the highlights including Britain's most used and least used stations.

Jay Symonds - Station usage stats are live
Annual estimates of the number of entries/exits and interchanges at each station in Great Britain. For more...
[youtube.com](#)

4 12 21

Show this thread

- ORR's most popular statistics
- Close working with ORR comms team



Station usage methodology

- Estimates primarily based on data from LENNON, the rail industry's ticketing and revenue system
- Supplemented by local ticketing data for Passenger Transport Executive (PTE) areas
- Further adjustments e.g. 'London terminals'
- Origin Destination Matrix (ODM)
- Limitations e.g. ticketless travel, assumptions regarding origins/destinations and multi-use tickets

How these statistics can and cannot be used



- Monitoring the number of annual entries and exits or interchanges at individual stations e.g. to understand demand
- Monitoring how usage at individual stations changes over time (subject to methodology changes) and insights as to why
- Comparing the relative usage of stations within local areas, regions or across the whole of Great Britain
- To gauge the use of different ticket types e.g. season vs reduced



- Monitoring passenger rail usage at a national level, by train operating company or by ticket type (refer to [Passenger rail usage statistics](#))
- Monitoring the number of passenger journeys between and within regions (refer to [Regional rail usage statistics](#))
- Exploring rail journey flows between origin and destination stations
- Volume of entries compared to exits at an individual station (methodology makes these equal)

28 JAN 2021

TfL Annual Counts

Presentation to RSMG
28/01/2021

Alfonso Saco Díaz
Transport Planner at TfL



EVERY JOURNEY MATTERS

Contents

- Background
- Methodology
- Examples
- Comparison to other datasets



Background

- Annual Counts dataset provides a continuous consistent annual station entry / exit count trend for LU since 1971.
- As TfL railway network expands there is an increasing need to cover all the modes in a comparable manner for planning. Since 2017, all other TfL operated rail modes (LO, DLR and TfL Rail) are included.
- Data capture covers P7, P8 and P9 demand.
- Traditionally, 3 typical day types are reported: Monday to Friday, Saturday and Sunday. Since 2017, Monday to Friday is split into Monday to Thursday and Friday to capture Night Tube (and Overground!) demand.
- Demand is reported by 15 minute periods for each typical day and at annualised level.
- The dataset also feeds into other analysis tools that TfL use for wider planning purposes, such as more complex NUMBAT / RODS datasets.

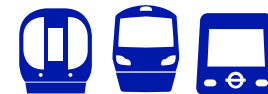
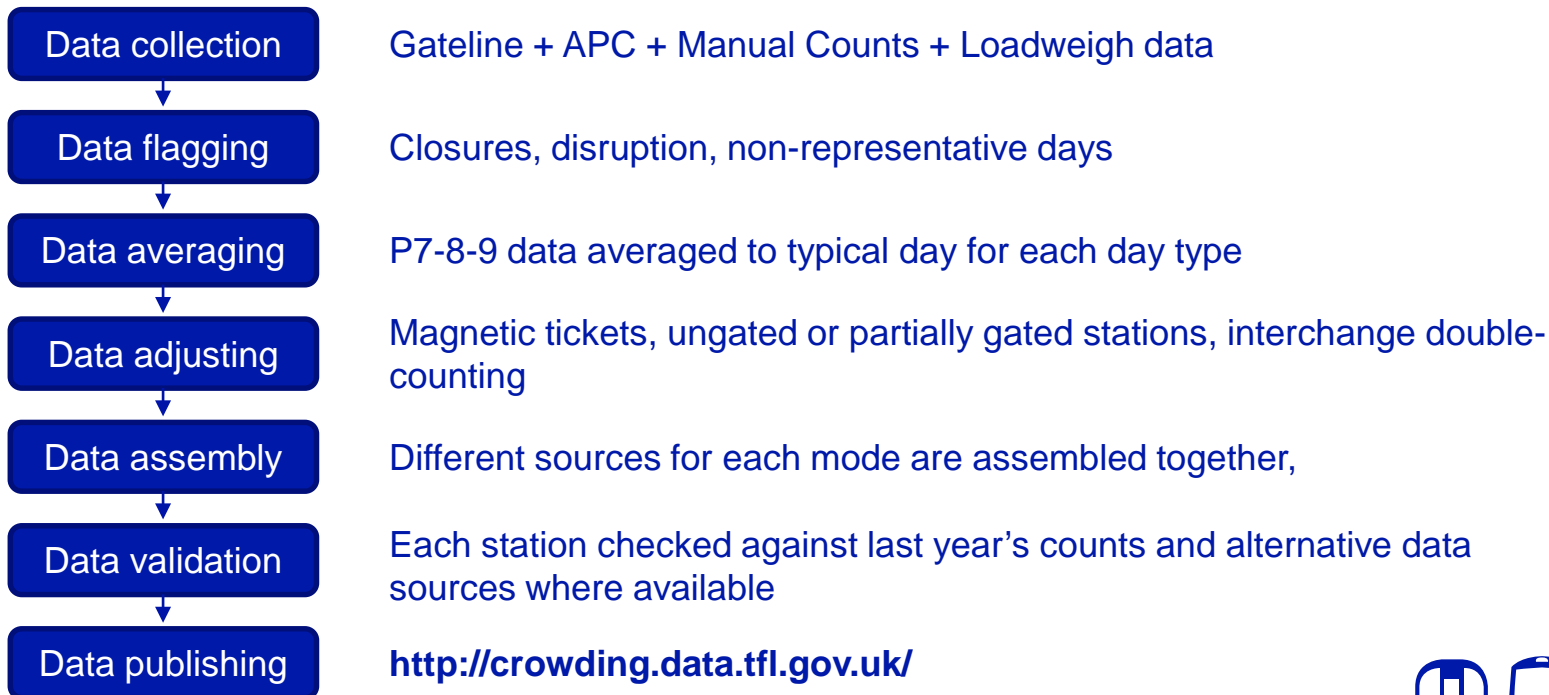


Background

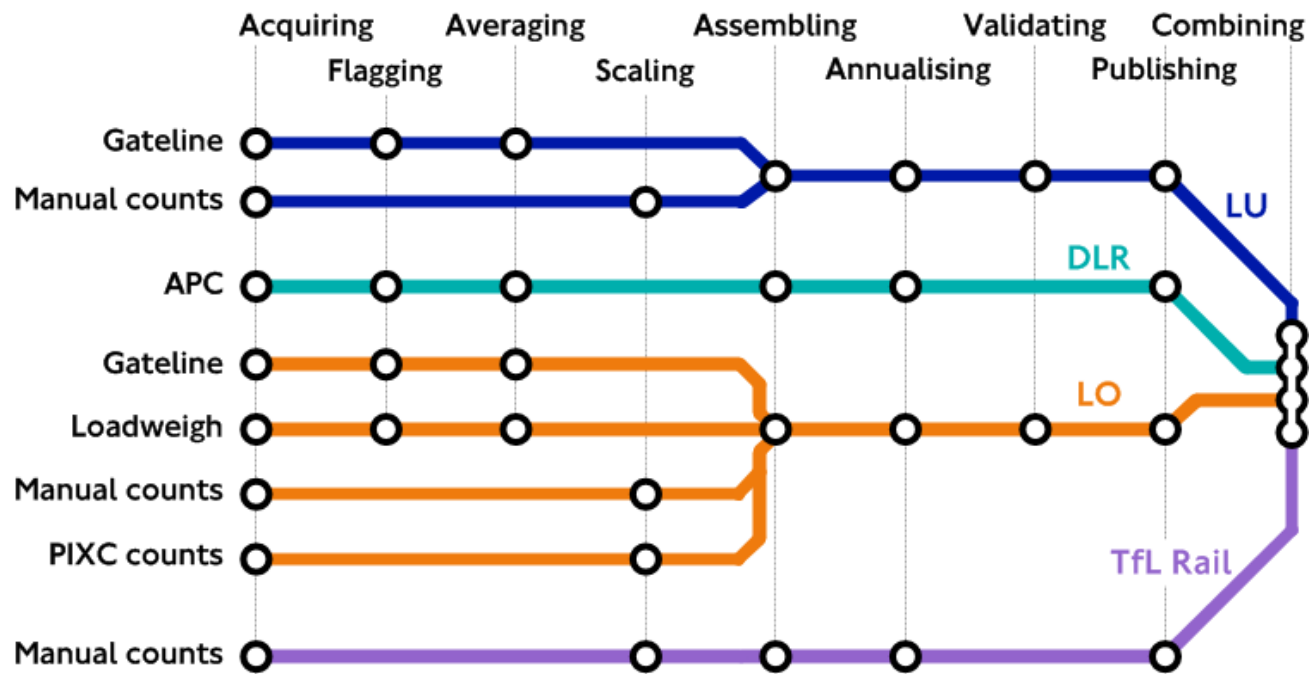
- To maintain the continuity, Annual Counts 2017 adheres to the following development principles to meet the user requirements:
 - To expand the current London Underground Annual Counts process
 - To maintain current output formats for LU
 - To create new outputs for all other modes
 - To ensure the expanded process is sustainable for long term operation, flexible for future output requirements and accessible to all users



Methodology



Methodology

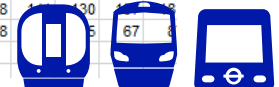


Examples

COUNTS (LU/LO/DLR/TfL Rail)--2019 // Station entries and exits by 15-minute

(C) Copyright Transport for London 2020

Counts by Station										hour (hr)														
revised 200529										quarter hour (qhr)														
Mode	NL	AS	Station	Coverage	yr	d	dir	Total	Earl	AM Pea	Inter Pea	PM Pea	Even	Lat	0500-0505	0515-0520	0530-0535	0545-0550	0600-0605	0615-0620	0630-0635	0645-0650	0700-0705	0715-0720
LU	719	SFDu	Stratford	Station entry / exit	2019	MTT	IN	97218	6410	21417	28106	25544	12806	2935	244	344	437	552	770	1182	1340	1541	1790	179
LU	719	SFDu	Stratford	Station entry / exit	2019	MTT	OUT	98508	2136	18795	30006	29756	12301	5514	13	34	96	186	212	352	549	694	847	93
LU	719	SFDu	Stratford	Station entry / exit	2019	SAT	IN	102731	3465	8804	38183	27271	17674	7334	130	201	256	321	491	573	701	792	859	78
LU	719	SFDu	Stratford	Station entry / exit	2019	SAT	OUT	105936	1389	7793	50883	23625	11842	10404	98	74	112	132	161	192	249	371	335	36
LU	719	SFDu	Stratford	Station entry / exit	2019	SUN	IN	68489	1892	6092	30051	21153	7333	1968	110	123	184	226	281	326	335	307	468	42
LU	719	SFDu	Stratford	Station entry / exit	2019	SUN	OUT	69371	854	4068	37425	14938	7797	4289	103	63	108	70	114	100	154	142	159	20
LO	719	SFDu	Stratford	LO boarding / alighting	2019	MTT	IN	26995	2656	8994	5739	6116	2781	709	0	0	0	340	211	619	330	1156	400	101
LO	719	SFDu	Stratford	LO boarding / alighting	2019	MTT	OUT	25856	467	5549	6028	9352	3330	1130	0	0	0	0	0	92	170	205	270	49
LO	719	SFDu	Stratford	LO boarding / alighting	2019	SAT	IN	21224	936	2822	7831	4896	3375	1364	0	0	58	65	181	107	234	291	324	31
LO	719	SFDu	Stratford	LO boarding / alighting	2019	SAT	OUT	20146	166	1857	8591	4769	3000	1763	0	0	0	0	0	0	93	73	101	11
LO	719	SFDu	Stratford	LO boarding / alighting	2019	SUN	IN	13077	0	685	6242	3855	1830	465	0	0	0	0	0	0	0	0	0	0
LO	719	SFDu	Stratford	LO boarding / alighting	2019	SUN	OUT	12174	0	177	6235	3187	1791	784	0	0	0	0	0	0	0	0	0	0
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	MTT	IN	16712	1121	5020	3661	4023	2114	773	4	32	45	66	117	206	280	371	442	45
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	MTT	OUT	16671	752	4080	3953	5827	1615	444	1	15	56	81	81	143	149	226	230	28
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	SAT	IN	13062	353	1236	4737	3300	2296	1140	4	16	22	31	44	56	79	101	117	11
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	SAT	OUT	12198	327	1334	5651	2708	1523	655	2	9	34	37	43	60	65	77	70	9
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	SUN	IN	9233	61	674	3671	2888	1431	508	2	2	4	2	5	5	15	26	38	4
DLR	719	SFDu	Stratford	DLR boarding / alighting	2019	SUN	OUT	8593	38	784	4468	1972	1008	323	1	2	4	1	5	4	9	12	41	5
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	MTT	IN	41032	913	8960	7875	15556	6294	1434	0	0	26	44	114	174	198	357	540	43
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	MTT	OUT	43214	4775	20369	8260	7094	2345	371	0	177	158	172	924	821	1123	1400	2064	108
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	SAT	IN	43081	1462	3711	16102	11502	7452	2852	55	85	108	135	207	242	296	334	362	33
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	SAT	OUT	43858	669	3274	21376	9924	4976	3639	40	45	52	72	76	93	112	179	141	15
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	SUN	IN	28925	799	2570	12671	8921	3092	872	46	52	78	96	118	138	141	130	141	15
TfLRail	719	SFDu	Stratford	fL Rail boarding / alighting	2019	SUN	OUT	29201	415	1707	15720	6275	3276	1808	51	29	55	33	56	48	55	67	67	8



EVERY JOURNEY MATTERS

Examples

COUNTS (LU/LO/DLR/TfL Rail)--2019 // Station annualised entries and exits
 (C) Copyright Transport for London 2020

Counts by Station
 revised 200529

							Typical							(p789 factor)
Mod	NL	ASC	Station	Coverage	Source	Weekday (Mon-Thu) entries	Friday entries	Saturday entries	Sunday entries	Weekday (Mon-Thu) exits	Friday exits	Saturday exits	Sunday exits	Annualised en/ex
LU	719	SFDu	Stratford	Station entry / exit	Gateline	97,218	104,093	102,731	68,489	98,508	106,822	105,936	69,371	64,853,194
LO	719	SFDu	Stratford	LO boarding / alighting	Loadweigh	26,995	27,278	21,224	13,077	25,856	26,050	20,146	12,174	15,957,564
DLR	719	SFDu	Stratford	DLR boarding / alighting	APC	16,712	16,806	13,062	9,233	16,671	16,732	12,198	8,593	10,453,296
TfLRail	719	SFDu	Stratford	TfL Rail boarding / alighting	Manual Count	41,032	43,491	43,081	28,925	43,214	47,316	43,858	29,201	27,300,570

COUNTS (LU/LO/DLR/TfL Rail)--2019 // Station annualised entries and exits
 (C) Copyright Transport for London 2020

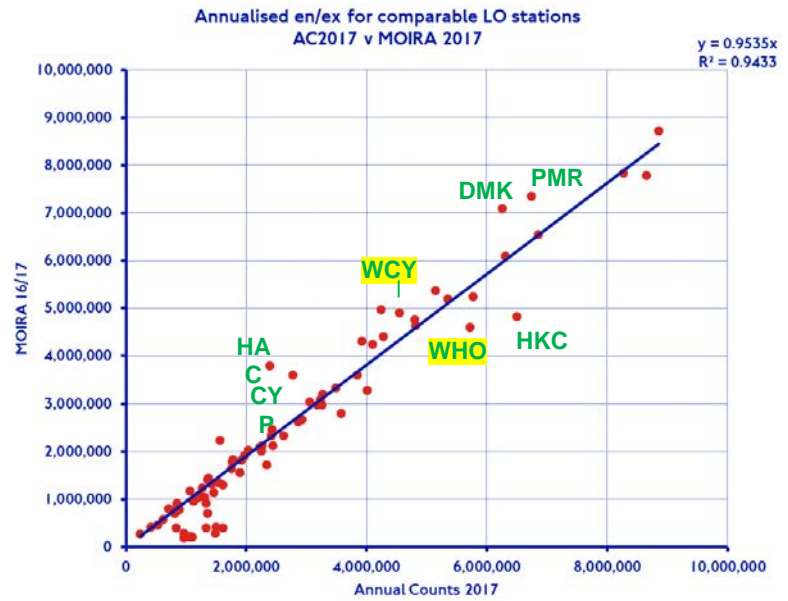
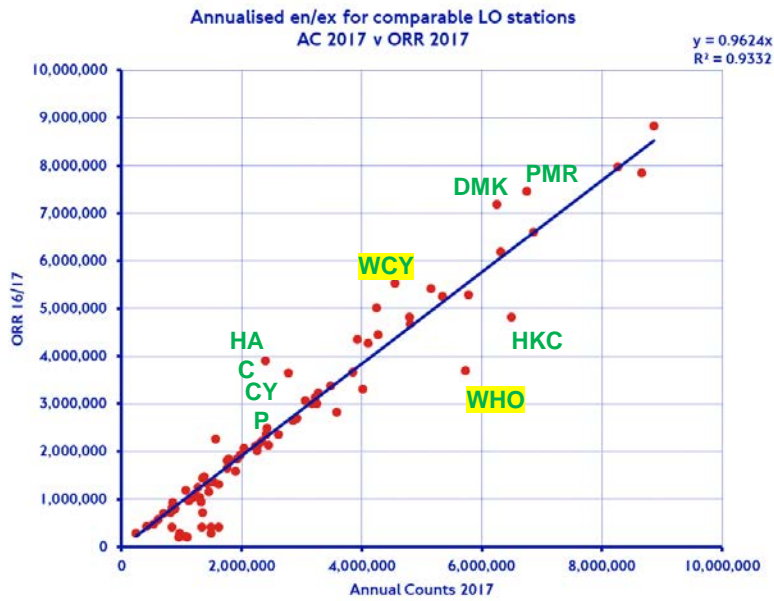
Counts by Station
 revised 200529

							Typical							(p789 factor)
Mod	NL	ASC	Station	Coverage	Source	Weekday (Mon-Thu) entries	Friday entries	Saturday entries	Sunday entries	Weekday (Mon-Thu) exits	Friday exits	Saturday exits	Sunday exits	Annualised en/ex
LU	514	BKGu	Barking	Station entry / exit	Gateline	30,017	30,294	20,645	14,019	30,356	30,261	19,919	14,074	18,133,350
LO	514	BKGu	Barking	LO boarding / alighting	Manual Count	5,639	6,519	4,381	3,330	5,915	6,051	3,767	3,089	3,488,686



EVERY JOURNEY MATTERS

Comparison to other datasets



Contact

Alfonso Saco Díaz

Transport Planner

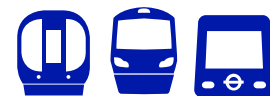
Public Transport Service Planning

alfonsosacodiaz@tfl.gov.uk

Rail & LU Passenger Demand Queries

SMBRODSCountsQuerie@tfl.gov.uk

<http://crowding.data.tfl.gov.uk/>



EVERY JOURNEY MATTERS