

BUS FLEET AUDIT

31 March 2024

This is an audit of the London Buses contracted fleet using data collated on 31 March 2024. This is the 29th audit and the report represents the results and makes comparisons with previous audits.

1. Summary

This year's fleet size of 8,776 buses represents an increase of 133 buses in comparison to last year's fleet total of 8,643. The number of vehicles in the fleet will change from time to time, as new vehicles enter service and the vehicles they are replacing are decommissioned.

The fleet total includes: 1,397 Electric buses, 1 NRM retrofitted to Electric, 20 Hydrogen and 3,826 Hybrid buses (including 997 new Routemasters). All vehicles in the fleet are PSVAR compliant.

2. London Bus Fleet by Age and Type as at 31 March 2024

The current data at 31 March 2024 shows the fleet size and the quantity registered in each year by type.

	OVERALL FLEET AGE PROFILE AS AT 31 MARCH 2024							
Year of Registration	DD	SD	Diesel	Electric	Fuel Cell	NRM Hybrid	Hybrid	Total
2007	-	3	3	-	-	-	-	3
2008	10	28	38	-	-	-	-	38
2009	166	137	298	-	-	-	5	303
2010	288	158	419	-	-	-	27	446
2011	476	263	656	-	-	-	83	739
2012	571	161	583	-	-	8	141	732
2013	467	86	286	1*	-	109	157	553
2014	488	72	83	-	-	236	241	560
2015	629	170	190	-	-	307	302	799
2016	794	233	256	49	-	227	495	1027
2017	688	340	334	18	-	109	567	1028
2018	479	265	199	66	-	1	478	744
2019	269	206	174	98	-	-	203	475
2020	250	67	13	170	4	-	130	317
2021	251	84	-	319	16	-	-	335
2022	175	57	-	232	-	-	-	232
2023	251	173	-	424	-	-	-	424
2024	9	12	-	21	-	-	-	21
TOTAL	6261	2515	3532	1398*	20	997	2829	8776

*Euro V NRM retrofitted to Zero Emission Electric

3. London Bus Fleet by Type – 31 March 2014 to 31 March 2024

Year as at 31 March		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
TOTAL		8765	8977	9186	9616	9396	9142	9102	9068	8795	8643	8776
Single deck	Diesel	2606	2662	2617	2612	2587	2435	2406	2309	2130	2083	1972
	Hybrid	23	23	18	18	13	-	-	-	-	-	-
	Fuel Cell	8	8	8	8	10	10	2	2	2	-	-
	Electric	2	8	17	66	91	150	201	268	335	362	543
	TOTAL	2639	2701	2660	2704	2701	2595	2609	2579	2467	2445	2515
Double deck	Diesel	5315	5045	4804	4390	3463	2873	2605	2388	2004	1755	1560
	Hybrid (incl NRM)	811	1231	1717	2517	3227	3669	3773	3884	3854	3835	3826
	Fuel Cell	-	-	-	-	-	-	-	-	20	20	20
	Electric	-	-	5	5	5	5	115	217	450	587	854
	Electric NRM	-	-	-	-	-	-	-	-	-	1	1
	TOTAL	6126	6276	6526	6912	6695	6547	6493	6489	6328	6198	6261

4. Fleet Emission Standards Changes as at 31 March from 2014 to 2024

Emissions as at 31 March	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Euro VI	14	449	1194	2300	3383	4045	4274	4409	4361	4346	4339
Euro VI upgraded from EEV	-	-	-	-	135	225	378	396	311	282	246
Euro VI upgraded from Euro V	-	-	-	-	752	2296	2846	3028	2812	2654	2489
Euro VI upgraded from Euro IV	-	-	-	-	176	358	688	672	504	391	284
EEV	853	616	631	564	309	194	19	-	-	-	-
Euro V	3151	3687	3633	3585	2611	848	259	9	-	-	-
Euro IV	1683	1625	1628	1627	1256	861	288	57	-	-	-
Euro IV upgraded from Euro III	2934	2534	2060	1451	658	140	25	10	-	-	-
Euro II	121	50	10	10	10	10	7	0	-	-	-
Fuel Cell	8	8	8	8	10	10	2	2	22	20	20
Electric	2	8	22	71	96	155	316	485	785	949	1397
Electric upgraded from Euro V	-	-	-	-	-	-	-	-	-	1	1
Fleet Total	8765	8977	9186	9616	9396	9142	9102	9068	8795	8643	8776
Hybrid (incl NRM)	834	1254	1735	2535	3240	3669	3773	3884	3854	3835	3826

As at 31st March 2024, a total of 8,776 buses in the fleet are to the equivalent of Euro VI emissions standard or better. This represents a total of 100% of the fleet. The fleet included 1418 Zero Emission buses which is 16.16% of the total fleet.

5. Fleet Emissions by Bus Type and Operator as at 31 March 2024

Fuel	Body Type	EU Standard	31/03/24	Arriva Group	Go Ahead Group	Metroline	RATP	Stagecoach	Sullivan Buses	Transport UK*	University Bus
Diesel	Single deck	Euro VI upgraded from Euro IV	138	4	24	71	6	32	-	-	1
		Euro VI upgraded from Euro V	679	61	234	120	91	102	6	65	-
		Euro VI upgraded from EEV	19	-	19	-	-	-	-	-	-
		Euro VI	1136	88	260	92	257	254	19	161	5
	Double deck	Euro VI upgraded from Euro IV	146	69	33	11	1	27	5	-	-
		Euro VI upgraded from Euro V	1093	401	259	64	64	256	17	24	8
		Euro VI upgraded from EEV	207	-	-	181	1	21	-	-	4
		Euro VI	114	41	3	-	5	52	12	-	1
Hybrid	Double deck	Euro VI upgraded from Euro V	717	264	102	95	87	76	-	93	-
		Euro VI upgraded from EEV	20	-	-	-	18	-	-	-	2
		Euro VI	3089	535	796	618	254	548	-	335	3
Fuel cell	Double deck	Zero Emission	20	-	-	20	-	-	-	-	-
Electric	Single deck	Zero Emission	543	4	274	43	121	24	-	77	-
	Double deck	Zero Emission	854	61	266	121	214	96	-	93	3
		Zero Emission upgraded from Euro V	1	-	-	1	-	-	-	-	-
Total			8776	1528	2270	1437	1119	1488	59	848	27

*Transport UK formally Abellio

6. Operator Fleet Changes

The data as at 31 March from 2014 to 2024 details the individual bus operator fleet size by vehicle quantity, the respective % of the overall network fleet and fleet average age.

Fleet size as at 31 March											
OPERATOR	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Arriva Group	1733	1652	1634	1768	1706	1652	1648	1590	1527	1515	1528
<i>Ensignbus</i>	-	-	-	-	-	-	-	10	-	-	-
Go Ahead Group	1750	2298	2251	2370	2354	2141	2254	2265	2210	2161	2270
Metrobus	315	315	315								
Metroline	1606	1495	1680	1735	1678	1729	1602	1532	1491	1429	1437
RATP	960	1056	1047	1066	1076	1112	1086	1069	1234^	1187	1119
Quality Line	84	89	89	89							
HCT Group	86	180	92	152	129	152	157	163	159	1463*	1488
Stagecoach	1198	1062	1287	1290	1232	1176	1102	1198	1191		
Tower Transit	415	462	426	479	407	388	381	321	139^		
Sullivan Buses	22	22	26	43	64	68	69	78	74	74	59
Transport UK	596	661	738	708	745	720	798	831	756	800	848~
University Bus	-	-	5	5	5	4	5	11	14	14	27
Total	8765	8977	9186	9616	9396	9142	9102	9068	8795	8643	8776
Less than 10 years	6952	6651	7384	8186	8332	8163	7590	7261	6380	5907	5850

<p style="text-align: center;">% of Total fleet as at 31 March</p>											
OPERATOR	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Arriva Group	19.77	18.40	17.79	18.39	18.17	18.07	18.11	17.53	17.36	17.52	17.41
<i>Ensignbus</i>	-	-	-	-	-	-	-	0.11	-	-	-
Go Ahead Group	19.97	25.60	24.50	24.65	25.07	23.42	24.76	24.98	25.13	24.99	25.87
Metrobus	3.60	3.60	3.60								
Metroline	18.32	16.65	18.29	18.04	17.86	18.91	17.60	16.89	16.95	16.53	16.37
RATP	10.95	12.34	11.40	11.09	11.43	12.16	11.93	11.79	14.03^	13.73	12.75
Quality Line	0.96	0.99	0.99	0.99							
HCT Group	0.98	2.01	1.00	1.58	1.37	1.66	1.72	1.80	1.81	16.92*	16.96
Stagecoach	13.67	11.83	14.01	13.42	13.11	12.86	12.11	13.21	13.54		
Tower Transit	4.73	5.15	4.64	4.98	4.33	4.24	4.19	3.54	1.58^		
Sullivan Buses	0.25	0.25	0.28	0.45	0.68	0.74	0.76	0.86	0.84	0.86	0.67
Transport UK	6.80	7.36	8.03	7.36	7.93	7.88	8.77	9.16	8.60	9.25	9.66~
University Bus	-	-	0.05	0.05	0.05	0.04	0.05	0.12	0.16	0.16	0.31
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Less than 10 years	79.32	74.09	80.38	85.13	88.70	89.29	83.38	80.07	72.54	68.34	66.66
<p style="text-align: center;">Average Age of Fleet as at 31 March (years)</p>											
OPERATOR	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Arriva Group	7.43	6.39	6.17	5.93	5.28	6.07	6.76	7.40	8.06	8.99	9.64
<i>Ensignbus</i>	-	-	-	-	-	-	-	6.56	-	-	-
Go Ahead Group	6.40	7.16	6.83	5.78	5.63	5.54	6.06	6.65	7.25	7.84	7.77
Metrobus	6.70	6.70	6.70								
Metroline	5.60	6.26	6.41	6.31	6.16	6.09	6.08	6.83	7.51	8.37	8.69
RATP	5.60	6.63	5.73	6.82	6.73	5.62	5.91	6.64	5.95^	6.21	6.80
Quality Line	4.50	4.07	4.07	4.07							
HCT Group	6.20	7.72	7.00	2.36	2.67	3.20	4.26	5.22	6.15	7.85*	8.55
Stagecoach	7.10	6.54	6.73	6.43	6.50	5.91	6.19	6.26	7.02		
Tower Transit	5.40	6.10	5.38	5.41	5.48	5.27	6.18	6.34	7.11^		
Sullivan Buses	8.00	9.05	9.42	8.31	5.63	6.09	7.04	8.31	8.67	9.68	9.82
Transport UK	6.30	5.94	5.96	5.24	4.64	4.98	5.57	6.12	6.25	6.72	7.22~
University Bus	-	-	2.60	3.37	4.43	3.75	6.39	6.19	6.99	7.93	10.76
Total	6.20	6.41	6.47	6.00	5.77	5.70	6.11	6.69	7.12	7.82	8.23

* HCT and Tower Transit Lea Interchange operations absorbed into Stagecoach between 31.3.22 and 31.3.23

^ Tower Transit Westbourne Park operation absorbed into RATP Dev Transit London between 31.3.21 and 31.3.22

~ Transport UK formally known as Abellio

7. All Single Deck Vehicles – Breakdown by Year and Length

The tables below show the single deck fleet profile for both Diesel Euro VI and Zero Emission buses as at 31st March 2024 split by respective vehicle lengths. As at 31st March 2024 21.6% of the single deck fleet is zero emission.

Single Deck Bus age and length profile at 31 st March 2024								
Registration Year	7.8–7.9m	8.7-9.0m	9.3-9.7m	9.9-10.2m	10.3-10.5m	10.6-10.9m	11.5-12.0m	Total
2007		3						3
2008		6		19		3		28
2009		5		80	19	14	19	137
2010	7		12	130		9		158
2011		33	30	122		78		263
2012		24	38	56		43		161
2013		22	1	8		55		86
2014		20	8	12		32		72
2015		70	9		8	68	15	170
2016		61	48	1		76		186
2017		66	60		37	159		322
2018	6	13	19		14	140	7	199
2019		32	18		32	66	26	174
2020		13**						13
Total	13	368	243	428	110	743	67	1972

*To 31st March 2024

**Last New Diesel vehicles to enter the fleet

ZERO EMISSION Single Deck Bus age and length profile at 31 st March 2024								
Registration Year	7.8–7.9m	8.8-9.0m	9.3-9.7m	9.9-10.2m	10.4-10.5m	10.6-10.9m	11.5-12.0m	Total
2016							47	47
2017						18		18
2018						66		66
2019			10	22				32
2020			1			53		54
2021			12	24		48		84
2022		11				46		57
2023		19	43	39	1	71		173
2024*			9			3		12
Total	-	30	75	85	1	305	47	543

*To 31st March 2024

8. Double Deck Vehicles – Breakdown by Year

The double deck fleet profile as at 31st March 2024 shows the quantity by year registered and the transition from Diesel to Hybrid and then to Zero Emission technology. As at 31st March 2024 13.98% of the double deck fleet is zero emission.

Double Deck Bus age profile at 31 st March 2024				
Year	Diesel	Hybrid (inc NRM)	Electric	Hydrogen
2008	10			
2009	161	5		
2010	261	27		
2011	393	83		
2012	422	149		
2013	200	266	1*	
2014	11	477		
2015	20	609		
2016	70	722	2	
2017	12	676		
2018		479		
2019		203	66	
2020		130	116	4
2021			235	16
2022			175	
2023			251	
2024 [^]			9	
Total	1560	3826	855	20

*Euro V NRM retrofitted to Zero Emission Electric in 2022

[^] To 31st March 2024