UK Lineages report

This report gives summaries of UK specific lineages for week 2020-07-03. There are time lags due to batching, curation and analysis, the most recently sampled sequence is 2020-06-28. The analysis (eg time since last sample) is therefore undertaken from this date. 27611 sequences in the UK have been included in this analysis. 1167 lineages have been recorded, 565 of which only contain one sequence.

A few notes: the size of a lineage may be due to a low amount of transmission of this lineage, but it is likely also that it just hasn't been sampled as frequently, especially for newer lineages. It's also important to realise that these lineages are *estimates* of how we think the virus is spreading in the UK after being introduced from abroad, as the low evolutionary rate of the virus makes it difficult to separate lineages with certainty.

The minimum number of introductions is 937 and the maximum is 10919

Sequences which were replicates or too error-prone were removed from this analysis.

893 are lineages which only contained five sequences or fewer, and so have been left out of visualisation in the interests of clarity

Furthermore, those sequences which haven't been sampled in the last month are not shown.

Of the 66 that remain: 43 are pending extinction, ie last seen three weeks ago. 16 lineages have gone quiet, ie haven't been seen this week. 3 lineages have reactivated. 4 lineages have been continuously circulating.

The following table contains information about the ten largest lineages lineages and the number of sequences the dataset. Information about other lineages is found in the appendix, along with the raw data for all of the other figures.

Each entry is the count of sequences from each lineage in each country, with the percentage of the total sequences from that lineage that this count represents.

"Activity score" is calculated by taking the average gap between sampling for each lineage, and dividing it by the number of days since the lineage was last sampled. Therefore the higher the number, the more active the lineage is. If the score is above 1, then it has been sampled *more* recently than expected given its average gap size. We might interpret this as an increase in activity. If the score is below 1, it has been sampled *less* recently than expect given its average gap size, so we might interpret this as a decrease in activity.

The global lineages are correct as of the data release on 2020-05-19

It is written to "summary_files" as "lineage_summary.tsv" for further use, and the full list of lineages is available in the same directory as "all_lineages.csv"

Lineage name En	glan d Wales	Scotlar	Norther n d reland		Total sequence	æ€lobal lineage	Time since last sample (days)	Activity
UK5 669 (77	6 1168 .34%(13.49)	435 %5.02%	359 (4.15%)	Feb- 16, Jun- 27	8658	B.1.1.16, B.1.1.p12, B.1.1.4, B.1.1.p16, B.1.1.10, B.1.1.14, B.1.1.13, B.1.1.p11, B.1.1.p15, B.1.1.2, B.1.1.5, B.1.1, B.1.1.3, B.1.1.1	1	0.0152
UK107 129 (91	3 61 .44%()1.31%	$46 \\ (3.25\%$	14)(0.99%)	Feb- 09, Jun- 02	1414	B, B.2, B.2.5, B.2.1	26	0.0031
UK42 794 (58	368 .0%)(26.88°	205 7()14.97	2 %(0.15%)	Feb- 24, Jun- 21	1369	B.1.35, B.1.72, B.1.p11, B.1.5, B.1.p73, B.1, B.1.71	7	0.0123
UK36 68 (11	1 .2%)(0.16%	536 5)(88.3%	2)(0.33%)	Mar- 18, Jun- 06	607	B.1	22	0.006

Lineage name		s Scotla	Norther n t reland		Total sequence	ce€lobal lineage	Time since last sample (days)	Activity score
UK5670	\$62 54 (63.4%)(9.46%	150 %)(26.27)	5 %(0.88%)	Feb- 26, May- 27	571	B.2	32	0.005
UK2464	4 98 78 (53.6%)(14.03	180 3%\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0 %(0%)	Mar- 09, Jun- 18	556	B.1.p11, B.1	10	0.0182
UK199	260 55 (47.62%)10.07	227 7%/\dd 1.589	4 %(0.73%)	Feb- 26, Jun- 22	546	B.1.5, B.1.5.5, B.1, B.1.p73	6	0.0358
UK2913	3 87 18 (72.74%)3.38%	110 %)(20.68'	17 %(3.2%)	Mar- 07, Jun- 16	532	B.1.p11, B.1	12	0.0159
UK61	107 419 (20.19%)79.06	3 3%(0.57%	1 ()(0.19%)	Feb-	530	B, B.3	32	0.0056
UK5098	% 1 (1.36%)(0.23%	433 %)(98.41	0 %(0%)	Mar- 01, Jun- 05	440	B.1.8, B.1, B.1.p73	23	0.0095

These data is represented in the figure one. Note that the number of sequences is likely to be due more to differing sampling efforts in different regions, rather than genuine differences in numbers of cases.

The raw data for this bar chart are in the table above.

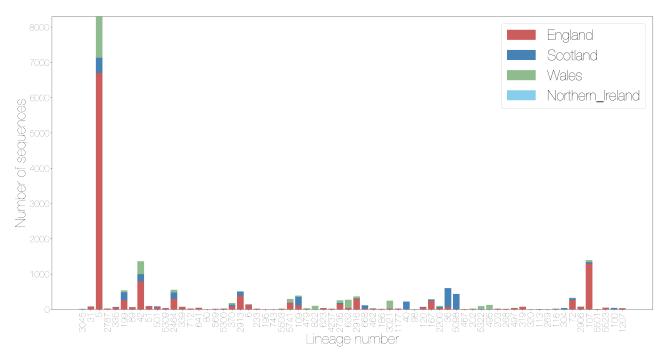


Figure 1: Number of sequences sampled in a lineage by country

Different sequencing centres have different delays in turn around from receipt of samples to submission of

sequence data. This will affect all of the figures shown after this if lineages have geographical variation, as some regions have less up to date data.

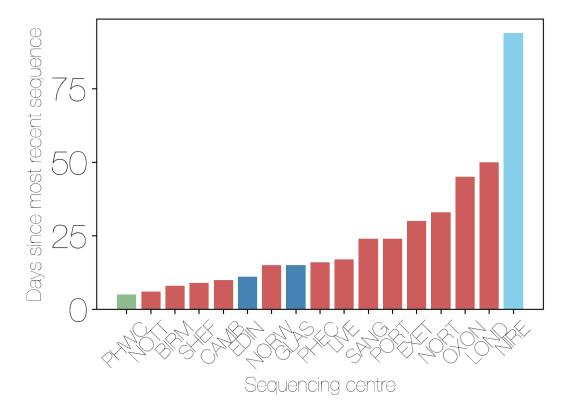


Figure 2: Lag since the most recent sequence from each sequencing centre to most current date

The relative growth and decline of the ten most sampled lineages in terms of number of counties they are present in is shown in figure three.

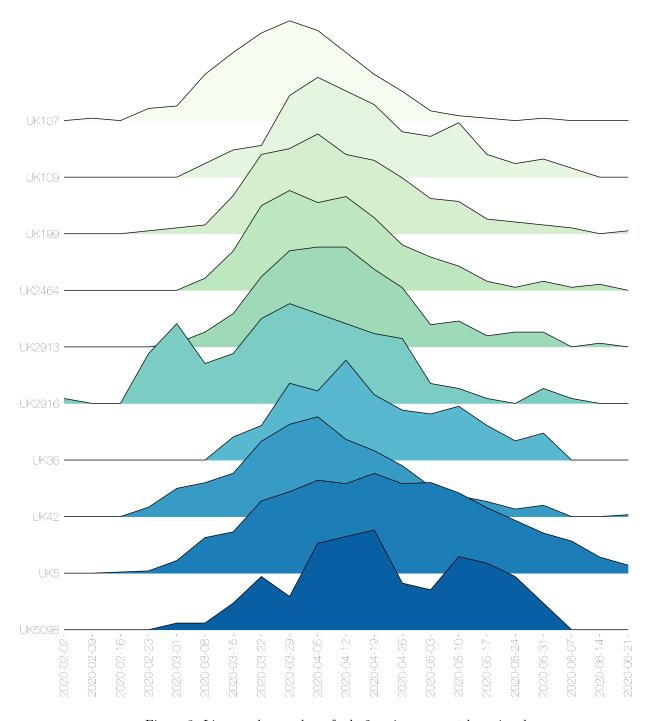


Figure 3: Lineages by number of adm2 regions present by epiweek

The growth and decline of diversity of lineages over time for each country is shown in the ridge plot in figure four. This is represented by the Shannon Diversity, calculated using the number of sequences from each country from each lineage.

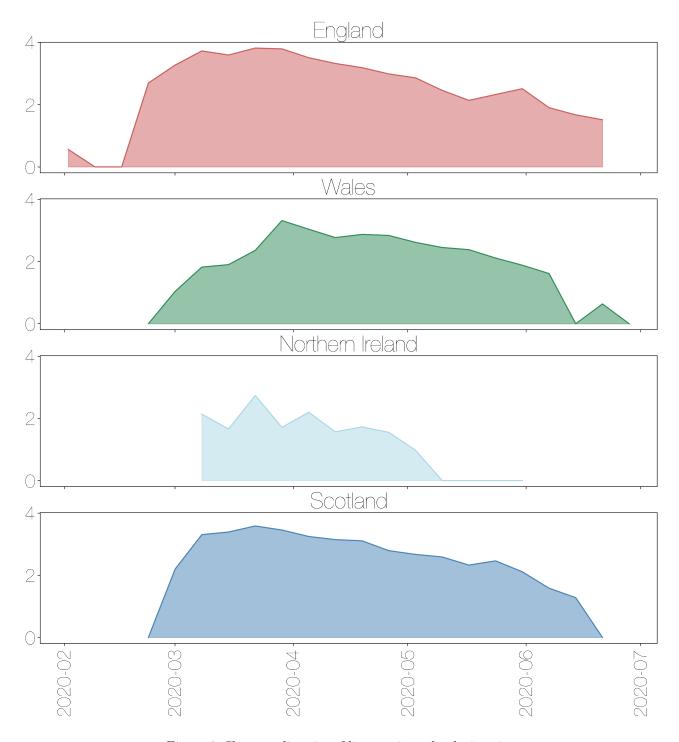


Figure 4: Shannon diversity of lineages in each adm1 region

These lineages are shown on the timeline. Each line represents the length of the cluster, from oldest to most recent sampling date. The dots are sized by the number of sequences taken on that date, and again are colour coded by country. The raw data has been written to a summary file.

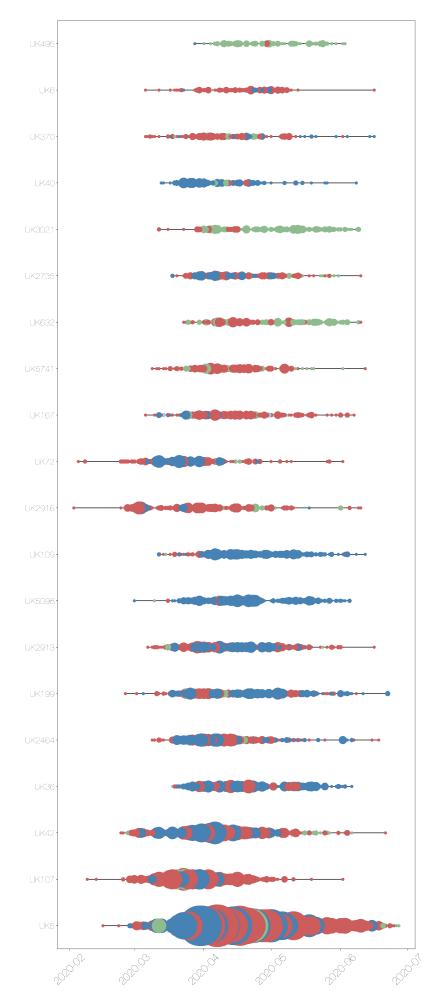


Figure 5: Timeline of lineages, sized by number of sequences from each country.

The date of first sequence in the cluster is shown in figure five for every cluster with date information.

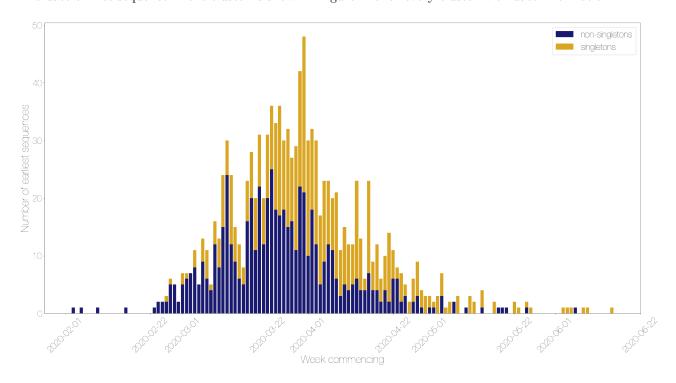


Figure 6: Lineage starts per week, split by singletons and non-singletons

For comparison, here is a plot of the day that every sequence was taken, coloured by country. Note that sequences without dates were not included.

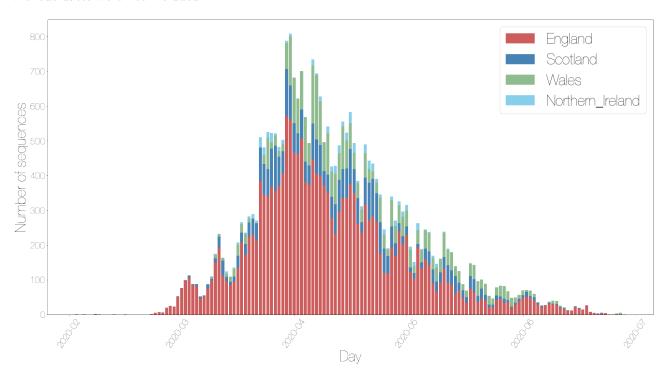


Figure 7: Sequences taken on each day by country

The map shows the number of sequences sampled in each admin2 region in the UK. The colour scale is the same for all four countries, but with different underlying base colours.

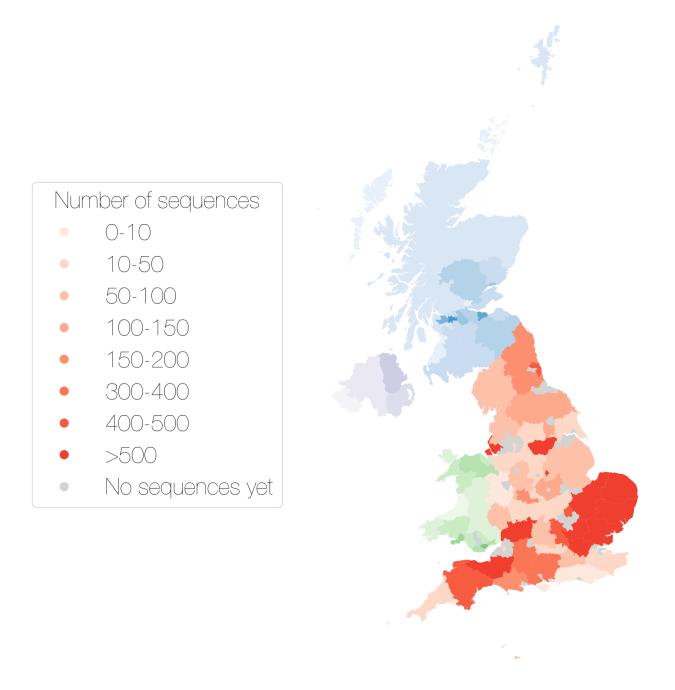


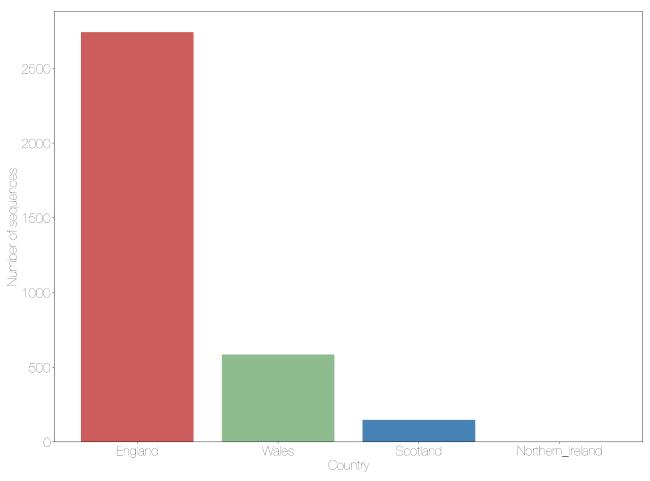
Figure 8: Map showing the number of sequences sampled by adm2 region

There are some sequences with locations that are not matched to real Admin2 regions, some manual curation required.

Other results modules for UK lineage analysis can be added in here if required.

Appendix

The plot below shows the number of sequences from each country that don't have specific enough location data to plot on the map.



Below are the raw data tables for each of the figures in the report.

 $\textbf{Table S1} \ \ \text{Description of all lineages that have been circulating in the last month, and have more than 5 sequences. } \\$

Lineage NorthernDate Total name EnglandWales Scotlandreland range sequenceGlobal lineage	Time since last sample (days)	Activity score
UK5 6696 1168 435 359 Feb- 8658 B.1.1.16, B.1.1.p12, B.1.1.4, (77.34%)13.49%)5.02%)(4.15%) 16, Jun- 27 B.1.1.13, B.1.1.p11, B.1.1.p15, B.1.1.2, B.1.1.5, B.1.1.5, B.1.1.3, B.1.1.11	1	0.0152
UK1071293 61 46 14 Feb- 1414 B, B.2, B.2.5, B.2.1 (91.44%)4.31%)(3.25%)(0.99%) 09, Jun- 02	26	0.0031
UK42 794 368 205 2 Feb- 1369 B.1.35, B.1.72, B.1.p11, B.1.5, (58.0%)(26.88%)14.97%(0.15%) 24, B.1.p73, B.1, B.1.71 Jun- 21	7	0.0123

· ·	ernDate	Total		Time since last sample	Activity
name EnglandWales Scotlandreland	d range	sequen	ceSlobal lineage	(days)	score
UK36 68 1 536 2 (11.2%)(0.16%)(88.3%)(0.33%)	Mar- 5) 18, Jun- 06	607	B.1	22	0.006
UK567 6 62 54 150 5 (63.4%)(9.46%)(26.27%)0.88%	Feb- (a) 26, May- 27	571	B.2	32	0.005
UK246 4 98 78 180 0 (53.6%)(14.03%)32.37%(0%)	Mar- 09, Jun- 18	556	B.1.p11, B.1	10	0.0182
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Feb- 5) 26, Jun- 22	546	B.1.5, B.1.5.5, B.1, B.1.p73	6	0.0358
UK291 3 87 18 110 17 (72.74%)3.38%)(20.68%)3.2%)	Mar- 07, Jun- 16	532	B.1.p11, B.1	12	0.0159
UK61 107 419 3 1 (20.19%)79.06%(0.57%)(0.19%	Feb- 23, May- 27	530	B, B.3	32	0.0056
UK509 % 1 433 0 (1.36%)(0.23%)(98.41%)0%)	Mar- 01, Jun- 05	440	B.1.8, B.1, B.1.p73	23	0.0095
UK109 111 35 244 8 (27.89%)(8.79%)(61.31%)2.01%	Mar-	398	B.1.5, B.1.5.5	16	0.0145
UK291 6 301 54 13 9 (79.84%)14.32%)3.45%)(2.39%	Feb-	377	B.1	18	0.0189
UK72 265 15 49 12 (77.71%)4.4%) (14.37%)3.52%	Feb-	341	B.2.2, B	26	0.0133
UK167 240 21 32 26 (75.24%)6.58%)(10.03%)8.15%	Mar-	319	B.1.66, B.1	21	0.0139
UK5741191 104 1 0 (64.53%)35.14%(0.34%)(0%)	Mar- 09, Jun- 12	296	B.1.44, B.1	16	0.0201
UK632 42 232 0 0 (15.33%)84.67%(0%) (0%)	Mar- 23, Jun- 10	274	B.1.1	18	0.0161

Lineage	NorthernDate	Total		Time since last sample	Activity
name EnglandWales Scotlan			ceGlobal lineage	(days)	score
UK273 5 50 76 32	14 Mar-	272	B.1.1	18	0.0172
(55.15%)27.94%)11.76% UK302123 225 0	(b.15%) 18, Jun- 10 0 Mar-	248	B.1	19	0.019
	(0%) 12, Jun- 09	227	D 1 10	44	0.0065
	0 Mar- (0%) 09, May- 15	227	B.1.13	44	0.0067
UK40 6 2 215 (2.69%)(0.9%) (96.41%)	0 Mar- (0%) 13, Jun- 08	223	B.16, B	20	0.0196
UK5561169 23 7 (84.5%)(11.5%)(3.5%)	1 Feb-	200	B.2.2, B.2	35	0.0128
UK15 141 11 36 (73.82%)5.76%)(18.85%	3 Feb-	191	B.1.1	53	0.0069
UK370 93 50 40 (48.69%\(\)26.18\(\)\(\)20.94\(\)	8 Mar-	191	B.1.1.10	12	0.0447
UK240 169 2 13 (91.85%)1.09%)(7.07%)	0 Feb-	184	B, B.2, B.2.5, B.2.1	32	0.0157
UK39 3 0 145 (2.03%)(0%) (97.97%	0 Mar-	148	A.2	30	0.0177
UK6 135 0 5 (96.43%)0%) (3.57%)	0 Mar-	140	B.1	12	0.0612
UK63 128 2 4 (95.52%)1.49%)(2.99%)	0 Mar-	134	B.1.1	49	0.0081
UK4 124 2 3 (95.38%)1.54%)(2.31%)	1 Feb-	130	В	60	0.0079
UK494125 1 2 (97.66%)0.78%)(1.56%)	0 Mar-	128	B.1.p11, B.1	54	0.0069

Lineage Northe		Total		Time since last sample	Activity
name EnglandWales Scotlandreland	range	sequence	ceGlobal lineage	(days)	score
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Mar- 28, Jun- 03	126	B.1.p11	25	0.0214
UK66 105 0 17 1 (85.37%0%) (13.82%0.81%)	Mar-) 18, May- 20	123	B.1.1.8	39	0.0132
UK668 28 1 87 0 (24.14%)0.86%)(75.0%)(0%)	Mar- 20, Jun- 10	116	B.1	18	0.0396
UK220 3 7 35 30 6 (34.26%)32.41%)27.78%)5.56%)	Jun- 06	108	B.1.5, B.1.5.6	22	0.0421
UK605 24 79 4 1 (22.22%)73.15%(3.7%) (0.93%)	Mar-) 17, May- 24	108	B.1.1, B.1.1.10	35	0.0182
$\begin{array}{cccc} {\rm UK8221} & 102 & 0 & 0 \\ & (0.97\%)(99.03\%)0\%) & (0\%) \end{array}$	Apr- 14, Jun- 11	103	B.1	17	0.0334
UK518 9 3 4 0 4 (92.08%)3.96%)(0%) (3.96%)	Mar-) 07, May- 09	101	B.1.1.7	50	0.0126
UK28 99 0 0 0 0 $(100.0\%0\%)$ (0%) (0%)	Mar- 13, May- 08	99	B.1.1.10	51	0.0112
UK601 23 0 9 66 (23.47%0%) (9.18%)(67.35%	Mar-	98	B.10	48	0.0131
UK51 88 0 7 1 (91.67%0%) (7.29%)(1.04%)	Mar-) 21, Jun- 20	96	B.1.36	8	0.1197
UK532 2 86 7 0 (2.11%)(90.53%)7.37%)(0%)	Mar- 22, Jun- 04	95	B.1.1	24	0.0328
UK77 88 4 0 0 (95.65%)\(\pm\).35%\(\pm\)(0%) (0%)	Mar- 11, May- 20	92	B.2	39	0.0197
UK549\$7 7 12 0 (79.12%[7.69%](13.19%[0%)	Mar- 06, May- 28	91	B, B.2	31	0.0297

					Time since last	
Lineage name EnglandWales	Northe Scotlan d reland		Total sequence	ceGlobal lineage	sample $ (days)$	Activity score
UK50166 1	20 0	Mar-	87	B.1	10	0.1151
(75.86%)1.15%		11, Jun- 18				
UK829 84 0 (98.82%0%)	$ \begin{array}{ccc} 1 & 0 \\ (1.18\%)(0\%) \end{array} $	Mar- 03, Apr- 29	85	B.2.5	60	0.0113
UK31 78 0 (95.12%0%)	4 0 (4.88%)(0%)	Mar- 12, Jun- 27	82	B.3	1	1.321
UK290672 2 (92.31%)2.56%	4 0 5)(5.13%)(0%)	Mar- 03, Jun- 02	78	B.1	26	0.0455
UK31977 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 28, Jun- 03	77	B.1	25	0.0353
UK33970 4 (92.11%)5.26%	$\frac{1}{5}(1.32\%)(1.32\%)$	Mar-) 09, Jun- 18	76	B.3	10	0.1347
UK38470 1 (95.89%)1.37%	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Feb- 28, Apr- 23	73	B.2, B.2.1	66	0.0116
UK120 58 0 (79.45%)0%)	15 0 (20.55%(0%)	Feb- 27, Jun- 07	73	B.14, B	21	0.0668
UK86 9 61 (12.68%)\$5.929	1 0 %()1.41%)(0%)	Mar- 05, May- 30	71	B.1	29	0.0424
UK335 58 1 (81.69%)1.41%	12 0 5)(16.9%)(0%)	Mar- 07, Jun- 22	71	B.1.1	6	0.2548
UK607 58 12 (82.86%)17.149	0 0 %(0%) (0%)	Mar- 02, May- 18	70	В	41	0.0272
UK89 58 12 (82.86%)17.145	0 0 %(0%) (0%)	Mar- 21, Jun- 22	70	B.1.1, B.1.1.9	6	0.2246
UK37 67 1 (97.1%)(1.45%	1 0 5(1.45%)(0%)	Mar- 17, May- 04	69	B.1, B.1.30	55	0.0128

Lineage	C41	Northe		Total	-Clabal lines m	Time since last sample	Activity
name EnglandWales						(days)	score
UK27463 2 (95.45%)3.03%	$\frac{1}{(1.52\%)}$	0)(0%)	Mar- 06, May- 19	66	B, B.3	40	0.0285
UK13 64 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 13, May- 21	64	B.1.1	38	0.0288
UK509 63 0 (100.0%0%)	0 (0%)	0 (0%)	Apr- 07, May- 29	63	B.1.1	30	0.028
UK476 56 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 14, May- 06	56	B.1.1	53	0.0182
UK371 54 1 (98.18%)1.82%	, ,	0 (0%)	Mar- 12, May- 06	55	B.1.1	53	0.0192
UK376 55 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 11, May- 03	55	B.1.1.9	56	0.0175
UK275 44 8 (83.02%)15.099	1 %)1.89%	0)(0%)	Mar- 09, Apr- 27	53	B.1.13	62	0.0152
UK187 5 29 (9.62%)(55.779	9 %)17.31%	9 %)17.31%	Mar- (2)21, Apr- 30	52	B.1	59	0.0133
UK448 50 1 (98.04%)1.96%	0 (0%)	0 (0%)	Apr- 04, May- 26	51	B.1.1	33	0.0315
UK552 \$ 1 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 16, Jun- 01	51	B.1	27	0.0341
UK51747 1 (94.0%)(2.0%)	2 (4.0%)	0 (0%)	Mar- 02, Apr- 30	50	B.1.1	59	0.0204
UK641 47 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 25, Jun- 17	47	B.1.1	11	0.166
UK276 46 0 (97.87%(0%)	1 (2.13%	0)(0%)	Mar- 15, May- 13	47	B.1.1	46	0.0279

Lineage		Norther	mate.	Total		Time since last sample	Activity
name EnglandWales	Scotla				ce©lobal lineage	(days)	score
UK478 46 0 (100.0%(0%)	0 (0%)	0 (0%)	Mar- 20, May-	46	B.1.1	40	0.0333
UK49739 4 (88.64%)9.09%	$\frac{1}{5}(2.27\%$	0 5)(0%)	19 Mar- 13, Jun- 03	44	A.2	25	0.0763
UK100 0 0 (0%) (0%)	43 (100.09	0 %(0%)	Mar- 22, Jun- 01	43	B.1.5, B.1	27	0.0626
UK64 31 12 (72.09%(27.91)	0 %(0%)	0 (0%)	Mar- 12, May- 05	43	B.1	54	0.0238
UK44 3 0 (7.14%)(0%)	37 (88.1%	2 5)(4.76%)	Mar-	42	В	66	0.0137
UK530 3 8 3 (92.68%) 7.32%	0 (0%)	0 (0%)	Mar- 20, Jun- 18	41	B.1.1, B.1.1.10	10	0.225
UK312641 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 06, May- 19	41	B.1.1	40	0.0269
UK623 40 0 (100.0%)0%)	0 (0%)	0 (0%)	May- 10, Jun- 11	40	B.1.1	17	0.0483
UK12 39 0 (97.5%)(0%)	0 (0%)	1 (2.5%)	Mar- 12, May- 07	40	B.1.p11, B.1	52	0.0276
UK3040 0 (0%) (0%)	40 (100.09	0 %(0%)	Apr- 16, Jun- 02	40	B.1.1.14	26	0.0464
UK13134 4 (89.47%)10.539	0 %(0%)	0 (0%)	Mar- 11, Apr- 14	38	B.15	75	0.0123
UK120 3 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 23, Jun- 01	37	B.1.1	27	0.072
UK17917 20 (45.95%)54.059	0 %(0%)	0 (0%)	Mar- 17, May- 07	37	B.1.1, B.1.1.p11	52	0.0272

Lineage	Northe	rnata	Total		Time since last sample	Activity
name EnglandWales				ceGlobal lineage	(days)	score
UK11929 7	1 0	Mar-	37	B.2.5	65	0.0188
(78.38%)18.92%	(2.7%) (0%)	11, Apr- 24				
	3 2 (8.33%)(5.56%)	Mar- 04, May- 18	36	B.2.2	41	0.0523
UK27 31 4 (86.11%)11.11%	1 0 (2.78%)(0%)	Mar- 05, May- 21	36	B.1.1	38	0.0579
	33 0 (91.67%0%)	Mar- 12, May- 21	36	В	38	0.0526
	0 0 (0%) (0%)	Mar- 24, May- 05	35	B.1	54	0.0229
	0 0 (0%) (0%)	Mar- 16, May- 25	34	B.1.1	34	0.0624
	33 0 (97.06%0%)	Mar- 12, Apr- 26	34	A.5	63	0.0216
UK479 6 28 (17.65%)82.35%	0 0 (0%) (0%)	Apr- 05, Jun- 12	34	B.1.1	16	0.1288
	33 0 (100.0%)0%)	Mar- 13, Apr- 24	33	B.1.70	65	0.0202
UK462 25 7 (78.12%)21.88%	0 0 (0%) (0%)	Apr- 01, Jun- 09	32	B.1	19	0.1171
	0 0 (0%) (0%)	Mar- 01, Apr- 19	32	B.1	70	0.0226
UK564 2 9 2 (90.62%6.25%)	1 0 (3.12%)(0%)	Mar- 15, May- 04	32	B.2.6	55	0.0293
	0 0 (0%) (0%)	Mar- 11, Apr- 14	31	B.1.1.7	75	0.0151

Lineage	N	Northern	Date	Total		Time since last sample	Activity
name EnglandWales					ce©Global lineage	(days)	score
UK241 31 0 (100.0%)0%)	0 0 (0%) (0	0%)	Mar- 22, Apr-	31	B.1.5.3	73	0.0114
UK21 0 0 (0%) (0%)	31 0 (100.0%)) 0%)	16 Mar- 18, May- 23	31	B.1.40	36	0.0611
UK23 30 0 (100.0%0%)	0 0 (0%) (0%)	0%)	Mar- 18, May-	30	B.9	50	0.0359
UK1667 0 (16.67%0%)	25 0 (83.33%)	0%)	Mar- 30, May- 18	30	B.1.9, B.1.p9	41	0.0412
UK567 4 20 (13.33%)66.679	5 1 %(16.67%)	8.33%)	Mar-	30	B.2.2	44	0.0439
UK158 29 0 (100.0%)0%)	0 0 (0%) (0	0%)	Mar- 23, Apr- 24	29	B.1.1	65	0.0176
UK4822 0 (6.9%) (0%)		27 93.1%) (Apr-	29	B.1.1	54	0.0212
UK172 2 7 1 (96.43%)3.57%	0 0	0%)	Mar- 19, May- 08	28	B.1	51	0.0363
UK101 26 0 (96.3%)(0%)	1 0 (3.7%) (0	0%)	Mar- 21, Apr- 25	27	B.1.5	64	0.021
UK46 25 1 (92.59%)3.7%)	1 0 (3.7%) (0	0%)	Mar- 02, May-	27	B.2.1	51	0.0505
UK94 26 0 (100.0%)0%)	0 0 (0%)	0%)	Mar- 12, Apr- 19	26	B.2, B.2.1	70	0.0217
UK31711 12 (42.31%)46.159	3 0 %)11.54%)	0%) :	Mar- 13, Apr- 20	26	B.3	69	0.022
UK615 26 0 (100.0%(0%)	0 0 (0%) (0	0%)	Mar- 15, May- 15	26	B.1.1	44	0.0555

Lineage name EnglandWales Scotla	NorthernD		occClobal lineage	Time since last sample (days)	Activity score
UK6004 22 0		pr- 26	B.1.1	33	0.0667
(15.38%(84.62%(0%))	(0%) 01	ay-	D.1.1	33	0.0007
$\begin{array}{ccc} {\rm UK17326} & 0 & 0 \\ & (100.0\%0\%) & (0\%) \end{array}$	(0%) 14	pr-	В	69	0.0214
UK449 3) 0 26 (0%) (0%) (100.0	%(0%) 23	ay-	B.1	40	0.026
UK117 2 5 0 0 (100.0%)0%) (0%)	(0%) 22	ın-	B.1.1	19	0.1053
UK202 10 14 1 (40.0%)(56.0%)(4.0%)	(0%) 10	ın-	B.1.1	24	0.1493
UK47 20 5 0 (80.0%)(20.0%)(0%)	(0%) 17	ay-	B.1.1	41	0.063
UK68424 1 0 (96.0%)(4.0%) (0%)	0 A (0%) 08	pr- 25 8, fay-	B.1	38	0.0471
UK1169 16 0 $(36.0\%)(64.0\%)(0\%)$	0 M (0%) 24	ar- 25 l, in-	B.1	26	0.1122
UK32624 0 1 (96.0%)(0%) (4.0%)	0 M (0%) 22	far- 25 2, fay-	B.1.1.10	37	0.0687
$\begin{array}{ccc} {\rm UK61725} & 0 & 0 \\ & (100.0\%0\%) & (0\%) \end{array}$	0 M (0%) 29	ar- 25), pr-	B.1.1	61	0.0205
UK16121 4 0 (84.0%)(16.0%)(0%)	0 M (0%) 10	ar- 25), ay-	B.1.1	34	0.0931
UK71224 0 0 (100.0%)0%) (0%)	0 A (0%) 08	pr- 24 8, in-	B.1.5, B.1	10	0.3087
UK278 2 3 0 0 (100.0%)0%) (0%)	0 A (0%) 07	pr- 23 7, im-	B.1.1	2	1.8182

Lineage name EnglandWales	Northe Scotlan Healand		Total	coClohal lineaca	Time since last sample (days)	Activity score
UK530@2 0	1 0	Apr-	23	B.1.1	$\frac{\text{(days)}}{12}$	0.2273
(95.65%(0%)	(4.35%)(0%)	17, Jun- 16				
UK204 2 3 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 17, May- 09	23	B.1	50	0.0482
UK58 6 0 (26.09%)0%)	17 0 (73.91%00%)	Mar- 12, Apr- 24	23	B.1	65	0.0301
UK423 7 22 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 28, Jun- 10	22	B.1.1	18	0.1958
UK550 2 1 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 20, Jun- 12	21	B.1	16	0.2625
UK329 21 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 17, Apr- 26	21	B.1.34, B.1	63	0.0317
UK203 20 1 (95.24%)4.76%	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mar- 22, Jun- 03	21	B.1.1	25	0.146
UK17421 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 19, May- 22	21	B.1.5	37	0.0865
UK24 21 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 14, Apr- 10	21	B.2.1	79	0.0171
UK23321 0 (100.0%0%)	0 0 (0%) (0%)	May- 25, Jun- 15	21	B.1	13	0.0808
UK13416 0 (80.0%)(0%)	4 0 (20.0%)(0%)	Mar- 04, Apr- 07	20	B.1	82	0.0218
UK125 19 0 (95.0%)(0%)	1 0 (5.0%) (0%)	Mar- 30, May- 29	20	B.1.1	30	0.1053
UK60415 2 (75.0%)(10.0%	3 0)(15.0%)(0%)	Mar- 06, Mar- 17	20	B.1.1	103	0.0056

Lineage	Northe	rrData	Total		Time since last sample	Activity
name EnglandWales				ceGlobal lineage	(days)	score
	0 0 (0%) (0%)	Mar- 16, May-	20	B.1	58	0.0417
UK146 18 0 (94.74%)0%)	1 0 (5.26%)(0%)	01 Mar- 24, May-	19	B.1.1	52	0.047
UK36925 1 (78.95%)5.26%)	2 1 (10.53%)5.26%)	07 Mar- 12, May- 19	19	B.1.1	40	0.0944
UK70 16 1 (84.21%)5.26%)	0 2 (0%) (10.53%	Mar-	19	B.2	67	0.039
UK206 0 19 (0%) (100.0%	0 0 (00%) (0%)	Apr- 02, May- 20	19	B.1	39	0.0684
UK425 4 14 (22.22%)77.78%	0 0 (0%) (0%)	Mar- 28, May- 15	18	B.1.1	44	0.0642
UK502 0 0 (0%) (0%)	18 0 (100.0%)0%)	Mar- 06, Mar- 30	18	B.1.69	90	0.0157
	0 14 (0%) (82.35%	Mar-	17	B.1.1	60	0.0354
UK26813 4 (76.47%(23.53%	0 0 (0%) (0%)	Mar- 23, Jun- 03	17	B.1.1	25	0.18
UK71 16 1 (94.12%)5.88%)	0 0 (0%) (0%)	Mar- 08, May- 06	17	В	53	0.0696
UK83 13 1 (81.25%)6.25%)	2 0 (12.5%)(0%)	Feb- 29, Apr- 13	16	B.1.1	76	0.0386
UK304 ½ 14 (12.5%)(87.5%)	0 0 (0%) (0%)	Apr- 15, Jun- 28	16	B.1.1, B.1.1.p11	0	active today
UK186 15 1 (93.75%)6.25%)	0 0 (0%) (0%)	Mar- 27, Jun- 09	16	В	19	0.2596

Lineage name EnglandWales	Northe		Total	goClobal linga go	Time since last sample (days)	Activity score
UK6950 16	0 0	Mar-	16	B.1.67	77	0.0156
(0%) (100.0		25, Apr-	10	5.1.01		0.0100
UK56606 0 (100.0%0%)	0 0 (0%) (0%)	Apr- 25, May- 08	16	B.1.1	51	0.017
UK569 16 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 23, Jun- 16	16	B.1.1	12	0.4722
UK38 14 0 (93.33%(0%)	$\frac{1}{(6.67\%)(0\%)}$	Mar- 04, Apr- 20	15	B.2.1	69	0.0487
UK832 14 0 (93.33%0%)	$\frac{1}{(6.67\%)(0\%)}$	Mar- 09, May- 10	15	A.5	49	0.0904
UK7220 0 (0%) (0%)	15 0 (100.0%)0%)	Mar- 23, May- 27	15	B.1.5	32	0.1451
UK153 15 0 (100.0%(0%)	0 0 (0%) (0%)	Mar- 13, Apr- 14	15	B.2, B.3	75	0.0305
UK49 12 0 (85.71%(0%)	$ \begin{array}{ccc} 1 & 1 \\ (7.14\%)(7.14\%) \end{array} $	Mar-) 12, May- 01	14	B.9	58	0.0663
UK1371 0 (7.14%)(0%)	$\begin{array}{ccc} 13 & 0 \\ (92.86\%0\%) \end{array}$	Mar- 09, Mar- 31	14	B.1.1	89	0.019
UK350 9 3 (64.29%)21.43	2 0 %()14.29%()0%)	Mar- 23, Apr- 21	14	B.1.1.10	68	0.0328
UK2610 0 (0%) (0%)	14 0 (100.0%)0%)	Mar- 15, Apr- 10	14	A.3	79	0.0253
UK571 13 0 (92.86%(0%)	$\frac{1}{(7.14\%)(0\%)}$	Feb- 29, Apr- 22	14	B.2	67	0.0608
UK32 14 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 29, May- 03	14	B.1.1	56	0.0481

Lineage name EnglandWales	Scotlar	Norther Freland		Total	ceGlobal lineage	Time since last sample (days)	Activity score
UK565 14 0	0 (0%)	0 (0%)	Apr- 14,	14	B.1.1	45	0.0513
UK436 0 1 (0%) (7.14%	13)(92.86%	0 (0%)	May- 14 Mar- 28, May-	14	B.1.5	45	0.0803
UK52710 4 (71.43%)28.57%	0 (0%)	0 (0%)	14 Mar- 22, Apr- 18	14	B.1	71	0.0293
UK60213 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 20, Apr-	13	B.1.1	87	0.0125
UK165 13 0 (100.0%)0%)	0 (0%)	0 (0%)	02 Apr- 13, May- 19	13	В	40	0.075
UK56633 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 23, May-	13	B.2	57	0.0585
UK13212 0 (92.31%0%)	1 (7.69%	0)(0%)	02 Mar- 27, Apr-	13	B.1	59	0.048
UK32813 0 (100.0%0%)	0 (0%)	0 (0%)	30 Apr- 13, Apr-	13	B.1	66	0.0126
UK34 13 0 (100.0%0%)	0 (0%)	0 (0%)	23 Feb- 27, Apr-	13	B.4	87	0.0335
UK530710 2 (76.92%)15.38%	1 {{\7.69%}	0)(0%)	02 Mar- 08, May-	13	B.1.1	47	0.1152
UK141 13 0 (100.0%0%)	0 (0%)	0 (0%)	12 Mar- 22, Apr-	13	B.1.1	65	0.0423
UK320 6 0 (46.15%)0%)	0 (0%)	7 (53.85%	Jun-	13	B.1	26	0.2308
UK28711 1 (91.67%)8.33%	0)(0%)	0 (0%)	02 Mar- 28, Apr- 24	12	B.1	65	0.0378

Lineage		Norther		Total		Time since last sample	Activity
name EnglandWales	Scotla	an d reland	range	sequene	ceGlobal lineage	(days)	score
UK56611 0 (91.67%0%)	1 (8.33%	0 %)(0%)	Apr- 02, Apr- 21	12	B.1.1, B.1.1.10	68	0.0254
UK50712 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 18, Apr- 30	12	B.1.1.10	59	0.0663
UK50840 2 (83.33%)16.67%	0 (()0%)	0 (0%)	Mar- 28, Apr- 16	12	B.1	73	0.0237
UK19311 1 (91.67%)8.33%		0 (0%)	Mar- 30, May- 01	12	B.1.1	58	0.0502
, , ,	0 (0%)	0 (0%)	Mar- 29, May- 14	12	B.1.5	45	0.0929
UK46711 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 23, Jun- 05	11	B.1.1	23	0.3217
UK17811 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 14, Apr- 13	11	B.1.1	76	0.0395
UK215 11 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 16, Apr- 11	11	B.2	78	0.0333
UK75911 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 28, Apr- 04	11	B.1.1	85	0.0082
UK28881 0 (100.0%0%)	0 (0%)	0 (0%)	Apr- 09, May- 14	11	B.1.1	45	0.0778
UK415 11 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 19, May- 06	11	B.1	53	0.0321
UK340 10 1 (90.91%(9.09%	0)(0%)	0 (0%)	Mar- 17, May- 17	11	B.1.1	42	0.1452
UK65311 0 (100.0%0%)	0 (0%)	0 (0%)	Apr- 07, May- 19	11	B.1.1	40	0.105

Lineag			Norther		Total		Time since last sample	Activity
name	EnglandWales	Scotlar	ndreland	range	sequenc	ceGlobal lineage	(days)	score
UK22	11 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 02, Apr- 21	11	В	68	0.0735
UK266	311 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 06, Apr- 30	11	B.1	59	0.0407
UK788	310 0 (100.0%)0%)	0 (0%)	0 (0%)	Feb- 28, Mar- 05	10	B.4	115	0.0058
UK584	19 0 (90.0%)(0%)	1 (10.0%	0)(0%)	Mar- 17, Apr- 02	10	B.2, B.2.1	87	0.0204
UK327	70 10 (0%) (100.09)	0 %(0%)	0 (0%)	Apr- 05, May- 05	10	B.1	54	0.0617
UK433	35 0 (50.0%)(0%)	5 (50.0%	0)(0%)	Mar- 22, May- 03	10	В	56	0.0833
UK133	33 0 (30.0%)(0%)	7 (70.0%	0)(0%)	Mar- 22, Apr- 25	10	B.1	64	0.059
UK565	63 0 (90.0%)(0%)	1 (10.0%	0)(0%)	Mar- 10, Apr- 01	10	B.2.6	88	0.0278
UK552	250 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 31, Apr- 29	10	B.1	60	0.0537
UK581	1 0 (10.0%)(0%)	0 (0%)	9 (90.0%)	Apr- 06, May- 01	10	B.1.1	58	0.0479
UK55	6 0 (60.0%)(0%)	4 (40.0%	0)(0%)	Mar- 13, May- 06	10	B.1.1	53	0.1132
UK263	39 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 20, Apr- 13	9	B.1.p11	76	0.0395
UK284	19 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 02, Apr- 25	9	B.1.1	64	0.0449

Lineage		Norther		Total		Time since last sample	Activity
name EnglandWales	Scotla	n l reland	range	sequenc	ceGlobal lineage	(days)	score
UK1139 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 22, Jun- 02	9	B.1.1	26	0.3462
UK4549 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 22, Apr- 29	9	B.1.1	60	0.0792
UK1219 0 (100.0%0%)	0 (0%)	0 (0%)	Apr- 21, May- 27	9	B.1.1.7	32	0.1406
UK91 8 1 (88.89%)11.119	0 %(0%)	0 (0%)	Mar- 01, Apr- 01	9	B.1	88	0.044
UK2448 1 (88.89%)11.119	0 %(0%)	0 (0%)	Mar- 10, Apr- 06	9	B.1.1	83	0.0407
UK563 9 0 (100.0%(0%)	0 (0%)	0 (0%)	Mar- 11, May- 01	9	B.1.1	58	0.1099
UK5509 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 16, Jun- 01	9	B.1.12	27	0.213
UK629 9 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 23, May- 05	9	B.1	54	0.0995
UK575 9 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 14, Apr- 16	9	B.2.1	73	0.0565
UK8199 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 01, May- 15	9	B.1	44	0.125
UK7569 0 (100.0%)0%)	0 (0%)	0 (0%)	Feb- 27, Mar- 05	9	B.1.1	115	0.0076
UK65 8 0 (88.89%)0%)	1 (11.11	0 %(0%)	Mar- 07, Apr- 21	9	B.1.1	68	0.0827
UK6988 0 (88.89%(0%)	1 (11.11	0 %(0%)	Mar- 23, Apr- 12	9	B.1.p73, B.1	77	0.0325

Lineage	No	orthernDate	Total		Time since last sample	Activity
name EnglandWales	Scotlandre	land range	sequen	ceGlobal lineage	(days)	score
UK181 % 0 (88.89%(0%)	1 0 (11.11%)0%	Mar- 21, Apr- 20	9	B.1.5, B.1	69	0.0543
UK491 9 0 (100.0%(0%)	0 0 (0%) (0%	Mar-	9	B, B.2	86	0.0451
UK80 5 3 (62.5%)(37.5%	0 0	Jun- 17	8	B.1.1.p15	11	1.013
`	7 0 (87.5%)(0%	Apr- 26	8	B.1	63	0.0544
UK195 7 1 (87.5%)(12.5%		Jun- 15	8	B.1	13	0.2967
UK633 0 8 (0%) (100.09	0 0 %(0%) (0%	Apr- 28	8	B.1.1.16, B.1.1.p16	61	0.0585
UK5940 0 (0%) (0%)	8 0 (100.0%)0%	Apr- 20, May- 01	8	В	58	0.0271
UK548 0 0 (0%) (0%)	8 0 (100.0%)0%	Mar- %) 14, Mar- 30	8	B.2.1	90	0.0254
UK151 0 0 (0%) (0%)	8 0 (100.0%)0%	Mar- 23, Apr- 24	8	B.1	65	0.0703
UK342 8 0 (100.0%)0%)	0 0 (0%) (0%	Apr- 02, Apr- 22	8	B.1.1	67	0.0426
UK465 % 0 (100.0%(0%)	0 0 (0%) (0%	Mar-	8	B.2.1	79	0.0506
UK530 8 0 (100.0%)0%)	0 0 (0%) (0%	Apr-	8	B.1.1	58	0.0049
UK5987 1 (87.5%)(12.5%	0 0	Mar-	8	B.1.1	75	0.0438

Lineage		ernDate	Total		Time since last sample	Activity
name EnglandWales				ceGlobal lineage	(days)	score
UK323 2 2 (25.0%)(25.0%)	4 0)(50.0%)(0%)	Mar- 12, May- 06	8	B.1.35, B.1.5, B.1	53	0.1482
UK5708 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 24, Apr- 29	8	B.1.1	60	0.0857
UK696 0 8 (0%) (100.0%	0 0	Apr- 10, May- 01	8	B.1.5, B.1	58	0.0517
UK369 7 0 (87.5%)(0%)	$\begin{array}{cc} 1 & 0 \\ (12.5\%)(0\%) \end{array}$	Mar- 22, Apr- 11	8	B.1.1	78	0.0366
UK755 8 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 06, May- 21	8	B.1.1	38	0.2857
UK739 8 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 01, Mar- 08	8	B.4	112	0.0089
UK6563 4 (42.86%)57.14%	0 0 (0%)	Mar- 13, Apr- 24	7	B.1.1.10	65	0.1077
UK490 7 0 (100.0%0%)	0 0 (0%) (0%)	Apr- 03, May- 02	7	B.1.1	57	0.0848
UK75 6 0 (85.71%00%)	1 0 (14.29%)0%)	Mar- 28, Apr- 12	7	В	77	0.0325
UK451 0 6 (0%) (85.71%	1 0 %(14.29%(0%)	Mar- 20, Apr- 05	7	B.2.1	84	0.0317
UK767 7 0 (100.0%)0%)	0 0 (0%) (0%)	Apr- 05, Apr- 19	7	B.1	70	0.0333
UK232 7 0 (100.0%)0%)	0 0 (0%) (0%)	Mar- 04, Mar- 30	7	B.1.1	90	0.0481
UK4644 2 (57.14%)28.57%	0 1 %(0%) (14.299	Mar-	7	B.1	55	0.1212

Lineage	. C41-	Northe		Total	-Clabal lines no	Time since last sample	Activity
name EnglandWales						(days)	score
UK171 2 0 (28.57%)0%)	5 (71.43	0 3%(0%)	Mar- 31, Apr- 21	7	B.1	68	0.0515
UK437 5 2 (71.43%)28.57	0	0 (0%)	Mar- 23, Apr- 11	7	B.1	78	0.0406
UK98 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 24, Jun- 08	7	B.6	20	0.6333
UK269 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 25, Jun- 02	7	B.1.1	26	0.4423
UK9576 0 (85.71%0%)	0 (0%)	1 (14.29%	Mar- (5)24, May- 26	7	B.1.1	33	0.3182
UK799 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 01, Mar- 07	7	B.1	113	0.0088
UK390 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 27, May- 01	7	B.1.5	58	0.1006
UK100 3 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 02, Apr- 22	7	B.1.1	67	0.0498
UK54 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 11, Apr- 02	7	B.2.4	87	0.0421
UK671 0 0 (0%) (0%)	7 (100.0	0 0%(0%)	Apr- 17, May- 31	7	B.1.p73	28	0.2619
UK4145 0 (71.43%(0%)	0 (0%)	$\frac{2}{(28.57\%)}$	Mar-	7	B.1.1	50	0.1333
UK728 7 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 19, Apr- 01	7	B.2, B.2.1	88	0.0246
UK5207 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 14, Apr- 08	7	B.2.1	81	0.0514

Lineage name Englan Wales	Northe Scotlan F reland		Total	reGlobal lineage	Time since last sample (days)	Activity score
$\frac{\text{Hame Eligiand vales}}{\text{UK2706}}$	1 0	Mar-	7	B	86	0.0581
(85.71%)0%)	(14.29%)0%)	04, Apr- 03				
UK5216 0 (100.0%(0%)	0 0 (0%) (0%)	Mar- 31, May- 01	6	B.1.1	58	0.1069
UK5521 0 (16.67%0%)	5 0 (83.33%0%)	Mar- 18, Mar- 30	6	A.1	90	0.0267
UK7436 0 (100.0%0%)	0 0 (0%) (0%)	Feb- 24, Jun- 14	6	B.1.5.1	14	1.5857
UK1063 1 (50.0%)(16.67)	2 0 %(\(\beta 3.33\)\(\text{0}\)\(\pi)	Mar- 09, Apr- 18	6	B, B.3	71	0.1127
UK419 0 0 (0%) (0%)	5 1 (83.33%)16.67%	Mar-	6	B.1.1	52	0.1462
UK564 % 0 (100.0 % (0 %)	0 0 (0%) (0%)	Mar- 08, Apr- 02	6	B.2	87	0.0575
UK3641 4 (16.67%)66.679	0 1 %(0%) (16.67%	Mar-	6	B.1	45	0.2489
UK1854 0 (66.67%(0%)	1 1 (16.67%)16.67%	Mar-	6	B.3	44	0.3
UK676 5 0 (83.33%0%)	1 0 (16.67%)0%)	Mar- 03, Mar- 12	6	B.1.1	108	0.0167
UK4036 0 (100.0%0%)	0 0 (0%) (0%)	Mar- 23, Apr- 14	6	B.1.1	75	0.0587
UK56 5 1 (83.33%)16.679	0 0 %(0%) (0%)	Mar- 18, Apr- 04	6	B.2	85	0.04
UK4566 0 (100.0%(0%)	0 0 (0%) (0%)	Apr- 03, Apr- 23	6	B.1.1	66	0.0606

Lineage name EnglandWales	Scotlar	Norther n d reland		Total sequence	ce⊊lobal lineage	Time since last sample (days)	Activity
UK6546 0 (100.0%0%)	0 (0%)	0 (0%)	Feb- 27, Mar- 08	6	B.2.5	112	0.0179
UK60 6 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 21, Mar- 30	6	В	90	0.02
UK186 7 5 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 18, Apr- 30	6	B.1.1	59	0.1458
UK6970 0 (0%) (0%)	6 (100.0%	0 %(0%)	Mar- 31, Apr- 24	6	B.1	65	0.0738
UK330 5 1 (83.33%)16.67	0 %(0%)	0 (0%)	Mar- 23, Apr- 08	6	B.1.1	81	0.0395
UK2936 0 (100.0%)0%)	0 (0%)	0 (0%)	Mar- 13, Apr- 16	6	B.3	73	0.0932
UK7776 0 (100.0%)0%)	0 (0%)	0 (0%)	Apr- 01, Apr- 14	6	B.1	75	0.0347
UK473 5) 0 (0%) (0%)	6 (100.0%	0 %(0%)	Apr- 22, May- 27	6	B.1.1	32	0.2188
UK2883 0 (50.0%)(0%)	2 (33.33%	1 %)16.67%	Mar-	6	B.2.1	85	0.0541
UK1966 0 (100.0%0%)	0 (0%)	0 (0%)	Mar- 15, Mar- 31	6	B.2.1	89	0.036
UK243 3 0 (50.0%)(0%)	3 (50.0%	0)(0%)	Mar- 18, Apr- 12	6	B.1.5	77	0.0649

 $\textbf{Table S2} \ \text{Raw data for figure two showing lags between the most recent sequence and current date for each sequencing centre}$

	Centre	Lag in days
0	PHWC	5
1	NOTT	6
2	BIRM	8
3	SHEF	9
4	CAMB	10
5	EDIN	11
6	NORW	15
7	GLAS	15
8	PHEC	16
9	LIVE	17
10	SANG	24
11	PORT	24
12	EXET	30
13	NORT	33
14	OXON	45
15	LOND	50
16	NIRE	94

 $\textbf{Table S3} \ \text{Raw data for figure three showing the number of admin2 regions a lineage is present in over time}$

Week commencing	UK5	UK107	UK42	UK36	UK2464	UK199	UK2913	UK5098	UK109	UK2916
2020-02-02	0	0	0	0	0	0	0	0	0	1
2020-02-09	0	1	0	0	0	0	0	0	0	0
2020-02-16	1	0	0	0	0	0	0	0	0	0
2020-02-23	2	5	5	0	0	1	0	0	0	10
2020-03-01	11	6	15	0	0	2	1	1	0	16
2020-03-08	31	19	18	0	4	3	4	1	3	8
2020-03-15	36	28	23	6	13	13	9	4	6	10
2020-03-22	63	36	40	9	28	27	19	8	7	17
2020-03-29	71	41	49	20	33	29	26	5	18	20
2020-04-05	81	37	53	18	29	34	27	13	22	18
2020-04-12	78	28	41	26	31	27	27	14	19	16
2020-04-19	87	19	35	17	24	25	21	15	16	14
2020-04-26	78	12	27	13	15	19	16	7	10	13
2020-05-03	79	4	16	12	11	12	6	6	9	4
2020-05-10	70	2	11	14	8	11	7	11	12	3
2020-05-17	57	1	8	9	3	5	3	10	5	1
2020-05-24	46	0	4	5	1	4	4	8	3	0
2020-05-31	35	1	6	7	3	3	4	4	4	3
2020-06-07	28	0	0	0	1	2	0	0	2	1
2020-06-14	14	0	0	0	2	0	1	0	0	0
2020-06-21	7	0	1	0	0	1	0	0	0	0

 ${\bf Table~S4}~{\rm Raw~data~for~figure~four~showing~the~Shannon~diversity~per~admin1~region~over~time}$

Week	England	Wales	Scotland	Northern Ireland
2020-02-02	0.562335	0	0	0
2020-02-09	-0	0	0	0
2020-02-16	-0	0	0	0
2020-02-23	2.69812	-0	-0	0
2020-03-01	3.27542	1.03972	2.1961	0
2020-03-08	3.73035	1.82175	3.30629	2.13833
2020-03-15	3.5986	1.90111	3.38952	1.65948
2020-03-22	3.82189	2.35921	3.58468	2.73527
2020-03-29	3.79534	3.31791	3.45432	1.71147
2020-04-05	3.51223	3.04127	3.24663	2.19792
2020-04-12	3.32701	2.77082	3.14563	1.56957
2020-04-19	3.19203	2.87373	3.10626	1.7272
2020-04-26	2.98946	2.83926	2.79133	1.55027
2020-05-03	2.8654	2.61705	2.66917	0.979229
2020-05-10	2.46193	2.45208	2.58735	-0
2020-05-17	2.13989	2.38265	2.32646	-0
2020-05-24	2.328	2.11254	2.46267	-0
2020-05-31	2.515	1.8823	2.10997	-0
2020-06-07	1.90464	1.61473	1.58326	0
2020-06-14	1.67341	-0	1.27703	0
2020-06-21	1.51715	0.636514	-0	0
2020-06-28	0	-0	0	0

 $\textbf{Table S5} \ \text{Raw data for figure five showing when lineages started per day, divided by singletons and non-singletons}$

Day	Number of singleton starts	Number of non-singleton starts	Total
2020-02-03	0	1	1
2020-02-05	0	1	1
2020-02-09	0	1	1
2020-02-16	0	1	1
2020-02-23	0	1	1
2020-02-24	0	2	2
2020 - 02 - 25	0	2	2
2020-02-26	1	2	3
2020-02-27	1	5	6
2020-02-28	0	5	5
2020-02-29	0	2	2
2020-03-01	2	5	7
2020-03-02	1	6	7
2020-03-03	0	7	7
2020-03-04	3	8	11
2020-03-05	0	5	5
2020-03-06	4	9	13
2020-03-07	5	6	11
2020-03-08	1	4	5
2020-03-09	4	12	16
2020-03-10	5	8	13
2020-03-11	9	15	24
2020-03-12	6	24	30
2020-03-13	12	12	24
2020-03-14	6	9	15
2020-03-15	6	6	12
2020-03-16	3	5	8
2020-03-17	7	16	23
2020-03-18	8	20	28
2020-03-19	9	11	20
2020-03-20	9	22	31
2020-03-21	8	12	20
2020-03-22	11	20 25	31
2020-03-23 2020-03-24	11 15	25 18	36 33
2020-03-24	19	17	36
2020-03-26	19	18	30
2020-03-20	17	15	32
2020-03-21	11	16	27
2020-03-28	18	11	29
2020-03-29	20	22	$\frac{23}{42}$
2020-03-30	27	21	48
2020-04-01	20	10	30
2020-04-01	14	18	32
2020-04-03	18	12	30
2020-04-04	12	5	17
2020-04-05	14	9	23
2020-04-06	11	12	23
2020-04-07	9	11	20
2020-04-08	15	6	21
2020-04-09	8	3	11
2020-04-10	10	5	15
2020-04-11	8	$\frac{3}{4}$	12
2020-04-12	7	5	12
2020-04-13	17	6	23
2020-04-14	9	4	13
2020-04-15	$\frac{1}{2}$	$\overline{4}$	6
	_	-	,

Day	Number of singleton starts	Number of non-singleton starts	Total
2020-04-16	16	7	23
2020-04-17	5	4	9
2020-04-18	8	4	12
2020-04-19	4	2	6
2020-04-20	6	4	10
2020-04-21	12	2	14
2020-04-22	5	6	11
2020-04-23	2	6	8
2020-04-24	5	2	7
2020-04-25	2	3	5
2020-04-26	2	0	2
2020-04-27	4	2	6
2020-04-28	6	3	9
2020-04-29	3	1	4
2020-04-30	3	0	3
2020-05-01	2	1	3
2020-05-02	1	1	2
2020-05-03	3	0	3
2020-05-04	4	3	7
2020-05-05	1	0	1
2020-05-06	2	0	2
2020-05-07	0	2	2
2020-05-08	3	0	3
2020-05-10	0	1	1
2020-05-11	3	0	3
2020-05-12	2	0	2
2020-05-14	3	1	4
2020 - 05 - 17	2	0	2
2020-05-18	0	1	1
2020-05-19	0	1	1
2020-05-20	0	1	1
2020-05-22	2	0	2
2020-05-23	1	0	1
2020-05-25	1	1	2
2020-05-26	1	0	1
2020-06-03	1	0	1
2020-06-04	1	0	1
2020-06-05	1	0	1
2020-06-06	0	1	1
2020-06-08	1	0	1
2020-06-09	1	0	1
2020-06-15	1	0	1

 ${\bf Table~S6~{\rm Raw~data~for~figure~six~showing~the~number~of~sequences~taken~over~time.}$

Day	England	Scotland	Wales	Northern Ireland
2020-02-03	1	0	0	0
2020-02-05	1	0	0	0
2020-02-08	2	0	0	0
2020-02-09	1	0	0	0
2020-02-13	1	0	0	0
2020-02-16	1	0	0	0
2020-02-23	2	0	0	0
2020-02-24	5	0	0	0
2020-02-25	7	0	0	0
2020-02-26	6	0	0	0
2020-02-27	19	0	1	0
2020-02-28	$\frac{1}{24}$	1	0	0
2020-02-29	23	0	0	0
2020-03-01	51	1	1	0
2020-03-02	76	1	0	0
2020-03-03	97	2	0	0
2020-03-04	107	5	1	0
2020-03-05	85	3	0	0
2020-03-06	81	7	0	0
2020-03-07	46	5	$\frac{\sigma}{2}$	0
2020-03-08	53	1	$\frac{2}{2}$	0
2020-03-09	75	12	1	0
2020-03-10	98	5	5	$\overset{\circ}{2}$
2020-03-10	151	11	10	3
2020-03-11	193	$\frac{11}{32}$	7	0
2020-03-12	113	42	8	1
2020-03-13	95	13	10	6
2020-03-14	86	8	15	0
2020-03-16	95	14	22	5
2020-03-17	136	33	32	7
2020-03-17	209	27	$\frac{32}{24}$	6
2020-03-19	172	31	30	3
2020-03-13	$\frac{112}{225}$	40	12	6
2020-03-20	$\frac{220}{232}$	44	0	13
2020-03-21	213	50	0	8
2020-03-22	385	96	1	29
2020-03-24	347	87	25	23
2020-03-24	341	78	91	16
2020-03-26	367	111	18	27
2020-03-20	356	130	29	7
2020-03-27	372	82	$\frac{23}{17}$	12
2020-03-28	407	63	22	11
2020-03-29	573	134	75	6
2020-03-30	562	98	141	8
2020-03-31	$\frac{362}{467}$	84	131	0
2020-04-01	461	61	99	1
2020-04-02	507	83	99 111	0
2020-04-03	$\frac{307}{382}$	58	$\frac{111}{128}$	1
2020-04-05	374 447	55 103	65 167	0
2020-04-06	447	103	167	18
2020-04-07	407	97	185	5
2020-04-08	397	91	126	14
2020-04-09	372	41	83	1
2020-04-10	350	53	120	19
2020-04-11	277	62	73	14
2020-04-12	233	85	87	23
2020-04-13	296	92	77	22

Day	England	Scotland	Wales	Northern Ireland
2020-04-14	335	84	123	14
2020-04-15	336	85	80	23
2020-04-16	376	101	74	32
2020-04-17	349	70 70	47	28
2020-04-18	262	73	43	7
2020-04-19	236	30 76	$\frac{37}{71}$	9
2020-04-20 2020-04-21	$\frac{318}{272}$	76 107	71 41	25 23
2020-04-21	284	107	21	23
2020-04-22	268	81	31	11
2020-04-23	175	91	70	10
2020-04-24	120	70	41	14
2020-04-26	119	49	19	4
2020-04-27	193	61	75	11
2020-04-28	169	36	51	15
2020-04-29	240	23	52	11
2020-04-30	202	24	56	15
2020-05-01	229	25	46	16
2020-05-02	123	13	51	9
2020-05-03	104	16	20	12
2020-05-04	194	9	40	20
2020-05-05	133	18	34	4
2020-05-06	158	32	53	2
2020-05-07	143	39	53	3
2020-05-08	90	40	32	7
2020-05-09	66	29	41	10
2020-05-10	92	30	38	1
2020-05-11	132	34	70	3
2020-05-12	92	50	44	4
2020-05-13	87	40	53	0
2020-05-14	61	50	28	0
2020-05-15	70	22	33	0
2020-05-16	49	21	18	0
2020-05-17	34	16	19	0
2020-05-18 2020-05-19	76	35	36	1
2020-05-19	$\frac{64}{36}$	38 18	$\frac{40}{42}$	$\frac{1}{0}$
2020-05-20	47	28	26	0
2020-05-21	40	17	$\frac{20}{32}$	0
2020-05-22	21	8	$\frac{32}{25}$	0
2020-05-24	21	8	18	0
2020-05-25	42	13	23	0
2020-05-26	46	6	31	0
2020-05-27	34	12	35	1
2020-05-28	35	7	25	0
2020-05-29	21	2	25	0
2020-05-30	29	5	15	0
2020-05-31	39	7	11	0
2020-06-01	49	7	13	1
2020-06-02	51	14	6	0
2020-06-03	49	4	16	0
2020-06-04	41	9	10	0
2020-06-05	30	3	3	0
2020-06-06	21	4	2	0
2020-06-07	26	1	1	0
2020-06-08	32	2	3	0
2020-06-09	31	1	8	0
2020-06-10	29	2	8	0
2020-06-11	19	3	4	0

Day	England	Scotland	Wales	Northern Ireland
2020-06-12	16	2	3	0
2020-06-13	12	1	0	0
2020-06-14	11	1	0	0
2020-06-15	21	3	0	0
2020-06-16	18	1	0	0
2020-06-17	14	1	0	0
2020-06-18	26	1	0	0
2020-06-19	7	0	1	0
2020-06-20	4	0	1	0
2020-06-21	3	0	0	0
2020-06-22	2	3	0	0
2020-06-23	4	0	0	0
2020-06-24	1	0	0	0
2020-06-25	1	0	0	0
2020-06-26	1	0	2	0
2020-06-27	1	0	4	0
2020-06-28	0	0	1	0

 $\textbf{Table S7} \ \text{Raw data for the figure seven with the number of sequences assigned to each admin 2 region.}$

Admin2	Country	Number of sequences	Sequence group
ABERDEEN	Scotland	23	10-50
ABERDEENSHIRE	Scotland	12	10-50
ANGLESEY	Wales	80	50-100
ANGUS	Scotland	69	50-100
ANTRIM	Northern Ireland	325	300-400
ARGYLL AND BUTE	Scotland	14	10-50
ARMAGH	Northern Ireland	29	10-50
BATH AND NORTH EAST SOMERSET	England	0	0
BEDFORDSHIRE	England	452	400-500
BERKSHIRE	England	21	10-50
BLACKBURN WITH DARWEN	England	0	0
BLACKPOOL	England	0	0
BLAENAU GWENT	Wales	59	50-100
BOLTON	England	0	0
BOURNEMOUTH	England	0	0
BRIDGEND	Wales	114	100-150
BRIGHTON AND HOVE	England	0	0
BRISTOL	England	18	10-50
BUCKINGHAMSHIRE	England	413	400-500
BURY	England	0	0
CAERPHILLY	Wales	$14\overline{2}$	100-150
CAMBRIDGESHIRE	England	727	>500
CARDIFF	Wales	586	>500
CARMARTHENSHIRE	Wales	148	100-150
CENTRAL BEDFORDSHIRE	England	0	0
CEREDIGION	Wales	16	10-50
CHESHIRE	England	44	10-50
CLACKMANNANSHIRE	Scotland	4	1-10
CONWY	Wales	162	150-200
CORNWALL	England	27	10-50
CUMBRIA	England	78	50-100
DARLINGTON	England	0	0
DENBIGHSHIRE	Wales	194	150-200
DERBY	England	0	0
DERBYSHIRE	England	30	10-50
DEVON	England	421	400-500
DORSET	England	192	150-200
DOWN	Northern Ireland	272	250-300
DUMFRIES AND GALLOWAY	Scotland	88	50-100
DUNDEE AND GALLOWAT	Scotland	278	250-300
DURHAM		161	150-200
EAST AYRSHIRE	England Scotland	93	50-100
	Scotland		
EAST DUNBARTONSHIRE EAST LOTHIAN	Scotland Scotland	73 57	50-100 50-100
EAST LOTHIAN EAST RENFREWSHIRE	Scotland	40	
			10-50
EAST RIDING OF YORKSHIRE	England Scotland	35	10-50
EDINBURGH	Scotland	478	400-500
EILEAN SIAR		2	1-10
ESSEX	England	1432	>500
FALKIRK	Scotland	102	100-150
FERMANAGH	Northern Ireland	5	1-10
FIFE	Scotland	51	50-100
FLINTSHIRE	Wales	131	100-150
GATESHEAD	England	0	0
GLASGOW	Scotland	1246	> 500
GLOUCESTERSHIRE	England	708	> 500
GREATER LONDON	England	2654	> 500

Admin2	Country	Number of sequences	Sequence group
GUERNSEY	Channel_islands	41	10-50
GWYNEDD	Wales	125	100-150
HALTON	England	0	0
HAMPSHIRE	England	347	300-400
HARTLEPOOL	England	0	0
HEREFORDSHIRE	England	59	50-100
HERTFORDSHIRE	England	1031	> 500
HIGHLAND	Scotland	10	10-50
INVERCLYDE	Scotland	42	10-50
ISLE OF WIGHT	England	1	1-10
ISLES OF SCILLY	England	0	0
JERSEY	Channel_islands	77	50-100
KENT	England	38	10-50
KINGSTON UPON HULL	England	0	0
LANCASHIRE	England	53	50-100
LEICESTER	England	0	0
LEICESTERSHIRE	England	109	100-150
LINCOLNSHIRE	England	73	50-100
LONDONDERRY	Northern Ireland	32	10-50
LUTON	England	0 30	0 10-50
MANCHESTER MEDWAY	England England	0	0
MERSEYSIDE	England England	549	>500
MERTHYR TYDFIL	Wales	103	100-150
MIDDLESBROUGH	England	0	0
MIDLOTHIAN	Scotland	146	100-150
MILTON KEYNES	England	0	0
MONMOUTHSHIRE	Wales	88	50-100
MORAY	Scotland	10	10-50
NEATH PORT TALBOT	Wales	119	100-150
NEWPORT	Wales	165	150-200
NORFOLK	England	626	>500
NORTH AYRSHIRE	Scotland	18	10-50
NORTH LANARKSHIRE	Scotland	273	250-300
NORTH LINCOLNSHIRE	England	0	0
NORTH SOMERSET	England	0	0
NORTH YORKSHIRE	England	123	100-150
NORTHAMPTONSHIRE	England	28	10-50
NORTHUMBERLAND	England	172	150-200
NOTTINGHAM	England	685	>500
NOTTINGHAMSHIRE	England	59	50-100
OLDHAM ODKANIN IGLANDS	England	0	0
ORKNEY ISLANDS	Scotland	1	1-10
OXFORDSHIRE	England	98	50-100
PEMBROKESHIRE PERTHSHIRE AND KINROSS	Wales Scotland	73 118	50-100 100-150
PETERBOROUGH	England	0	0
PLYMOUTH	England	1	1-10
POOLE	England	0	0
PORTSMOUTH	England	0	0
POWYS	Wales	77	50-100
REDCAR AND CLEVELAND	England	0	0
RENFREWSHIRE	Scotland	317	300-400
RHONDDA, CYNON, TAFF	Wales	0	0
ROCHDALE	England	0	0
RUTLAND	England	0	0
SALFORD	England	0	0
SCOTTISH BORDERS	Scotland	143	100-150
SHETLAND ISLANDS	Scotland	14	10-50

Admin2	Country	Number of sequences	Sequence group
SHROPSHIRE	England	6	1-10
SOMERSET	England	652	>500
SOUTH AYRSHIRE	Scotland	7	1-10
SOUTH GLOUCESTERSHIRE	England	0	0
SOUTH LANARKSHIRE	Scotland	70	50-100
SOUTH YORKSHIRE	England	1594	>500
SOUTHAMPTON	England	0	0
SOUTHEND-ON-SEA	England	0	0
STAFFORDSHIRE	England	62	50-100
STIRLING	Scotland	18	10-50
STOCKPORT	England	0	0
STOCKTON-ON-TEES	England	0	0
STOKE-ON-TRENT	England	0	0
SUFFOLK	England	596	> 500
SURREY	England	73	50-100
SUSSEX	England	1	1-10
SWANSEA	Wales	276	250-300
SWINDON	England	0	0
TAMESIDE	England	0	0
TELFORD AND WREKIN	England	0	0
THURROCK	England	0	0
TORBAY	England	0	0
TORFAEN	Wales	91	50-100
TRAFFORD	England	0	0
TYNE AND WEAR	England	496	400-500
TYRONE	Northern Ireland	25	10-50
VALE OF GLAMORGAN	Wales	191	150-200
WARRINGTON	England	0	0
WARWICKSHIRE	England	11	10-50
WEST DUNBARTONSHIRE	Scotland	49	10-50
WEST LOTHIAN	Scotland	131	100-150
WEST MIDLANDS	England	167	150-200
WEST YORKSHIRE	England	22	10-50
WIGAN	England	0	0
WILTSHIRE	England	386	300-400
WORCESTERSHIRE	England	13	10-50
WREXHAM	Wales	166	150-200
YORK	England	0	0