Lineages report for SANG

This report gives summaries of UK specific lineages sequenced by SANG for week 2020-06-05. There are time lags due to batching, curation and analysis, the most recently sampled sequence is 2020-05-25. The analysis (eg time since last sample) is therefore undertaken from this date. 4816 sequences in the UK from the sequencing centre SANG have been included in this analysis.

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 1871 and the maximum is 2625

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

1711 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 55 that remain: 53 are pending extinction, ie last seen three weeks ago. 2 lineages have reactivated.

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	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK5	313 (96.9%)	9 (2.79%)	1 (0.31%)	Mar-07, May-25	323	B.1.1.1	0	active today
UK2464	97 (84.35%)	18 (15.65%)	0 (0%)	Mar-12, May-01	115	B.1.p11	24	0.0183
UK9	93 (100.0%)	0 (0%)	0 (0%)	Mar-19, May-03	93	B.1.13	22	0.0222
UK494	68 (100.0%)	0 (0%)	0 (0%)	Mar-21, May-01	68	B.1.p11	24	0.0255
UK177	56 (100.0%)	0 (0%)	0 (0%)	Mar-27, May-01	56	B.1.1	24	0.0265
UK115	53 (100.0%)	0 (0%)	0 (0%)	Mar-17, Apr-20	53	B.2.1	35	0.0187
UK66	52 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-01	52	B.1.1.8	24	0.0359
UK2916	47 (97.92%)	0 (0%)	1 (2.08%)	Feb-27, May-10	48	B.1	15	0.1035
UK2913	46 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-30	46	B.1.p11	25	0.04
UK26	37 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-06	37	B.1.1.3	19	0.0716

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.

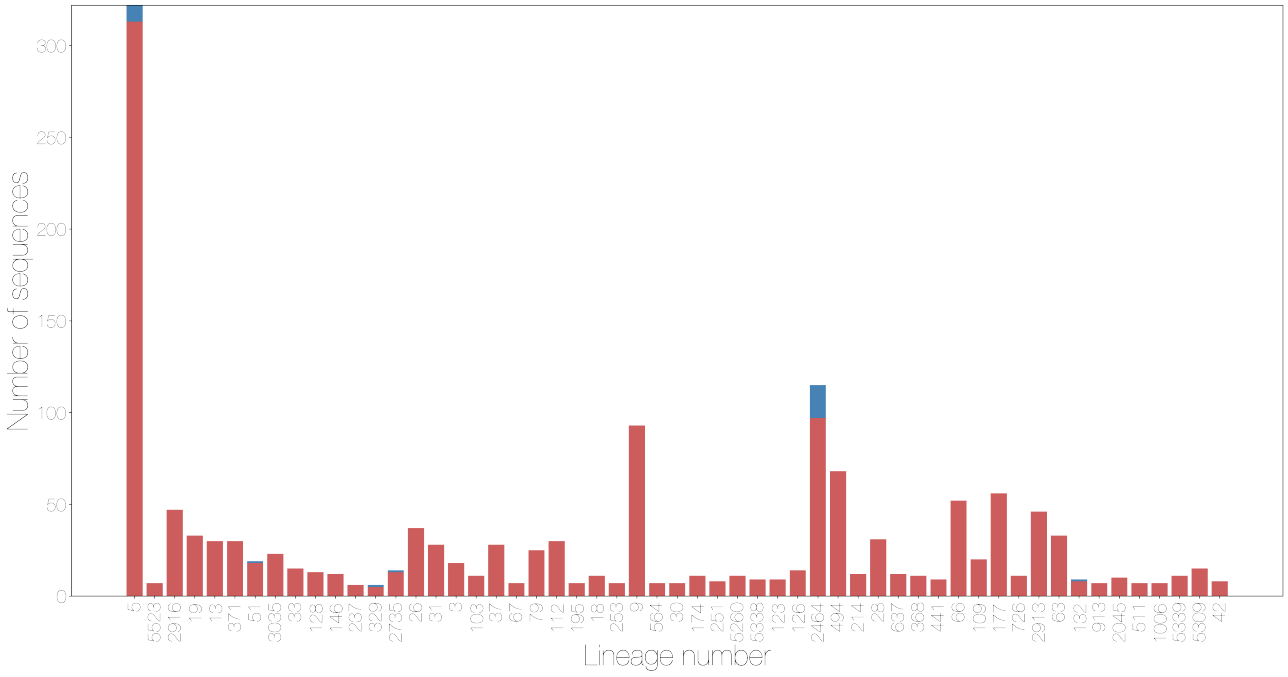

Figure 1: Number of sequences sampled in a lineage by country

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.

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The lag for this sequencing centre is 11 days
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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.

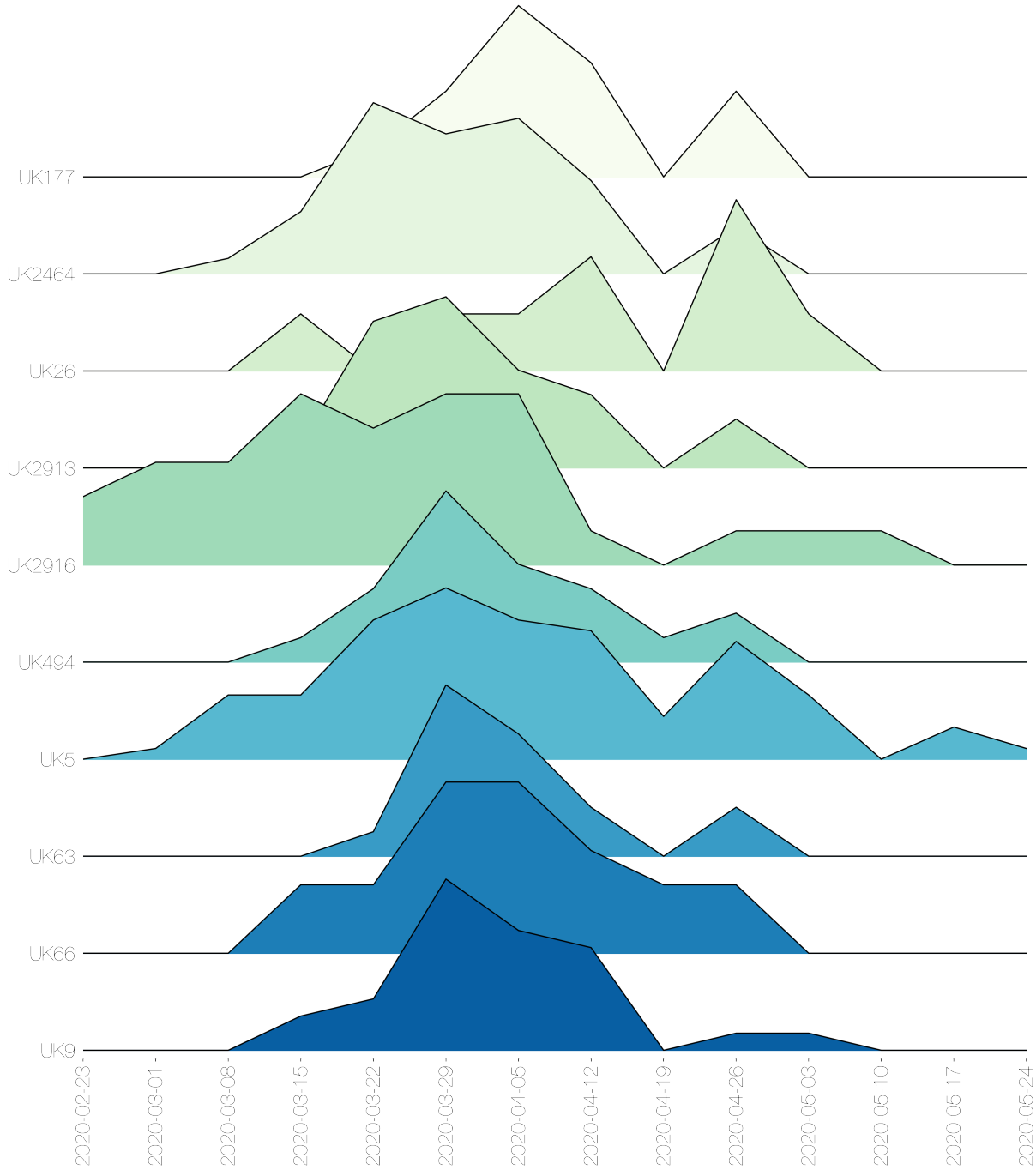

Figure 2: Lineages by number of adm2 regions present by epiweek

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.

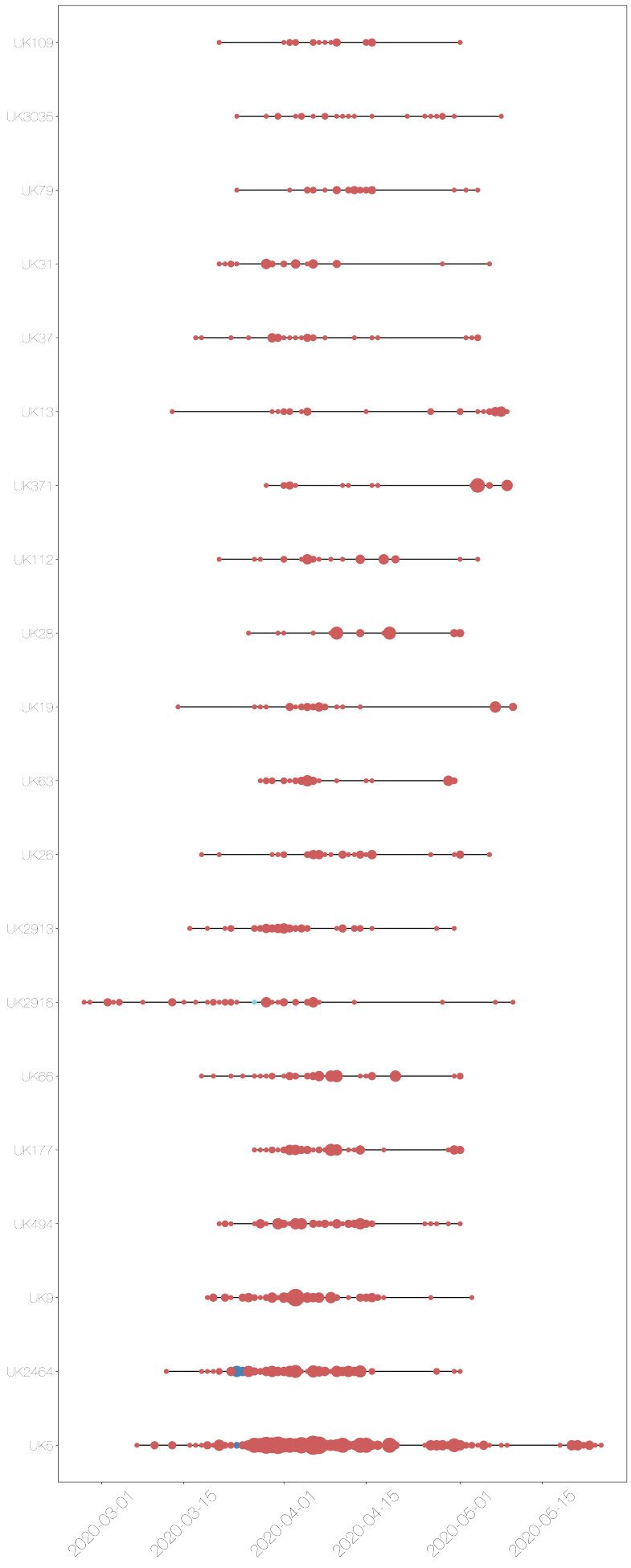

Figure 3: Timeline of lineages, sized by number of sequences from each country.

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

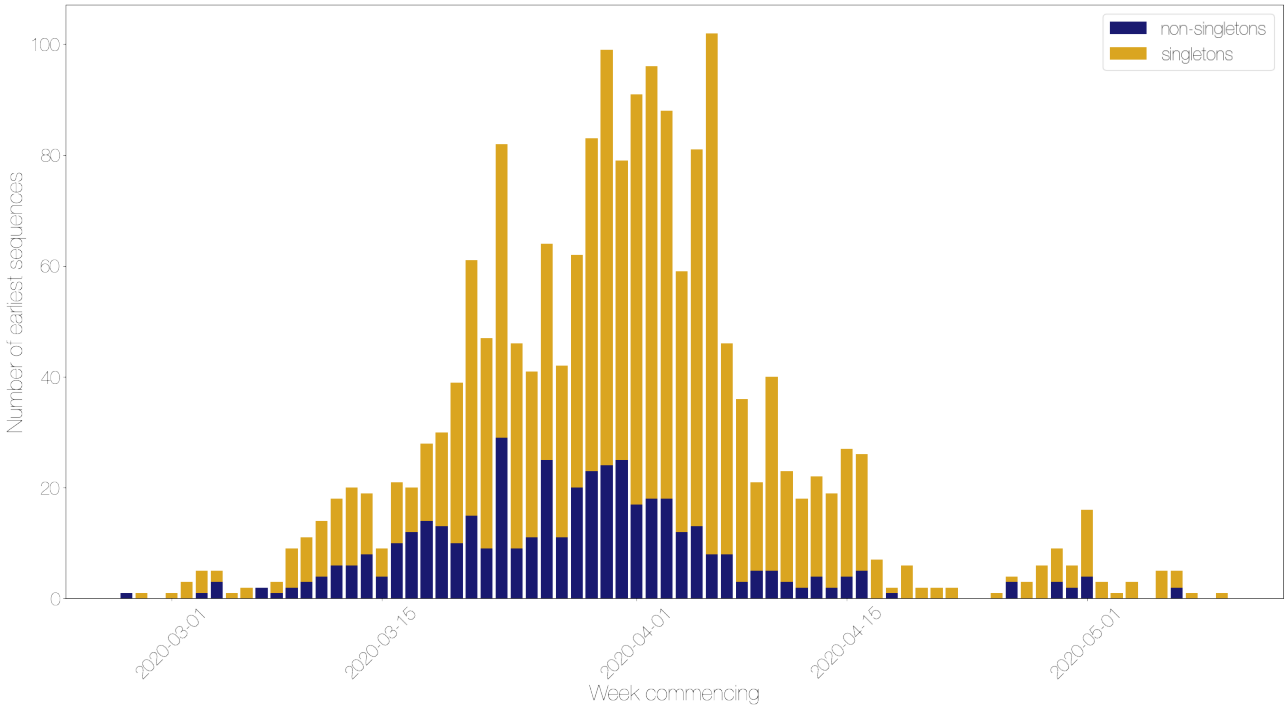

Figure 4: Lineage starts per week, split by singletons and non-singletons

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.

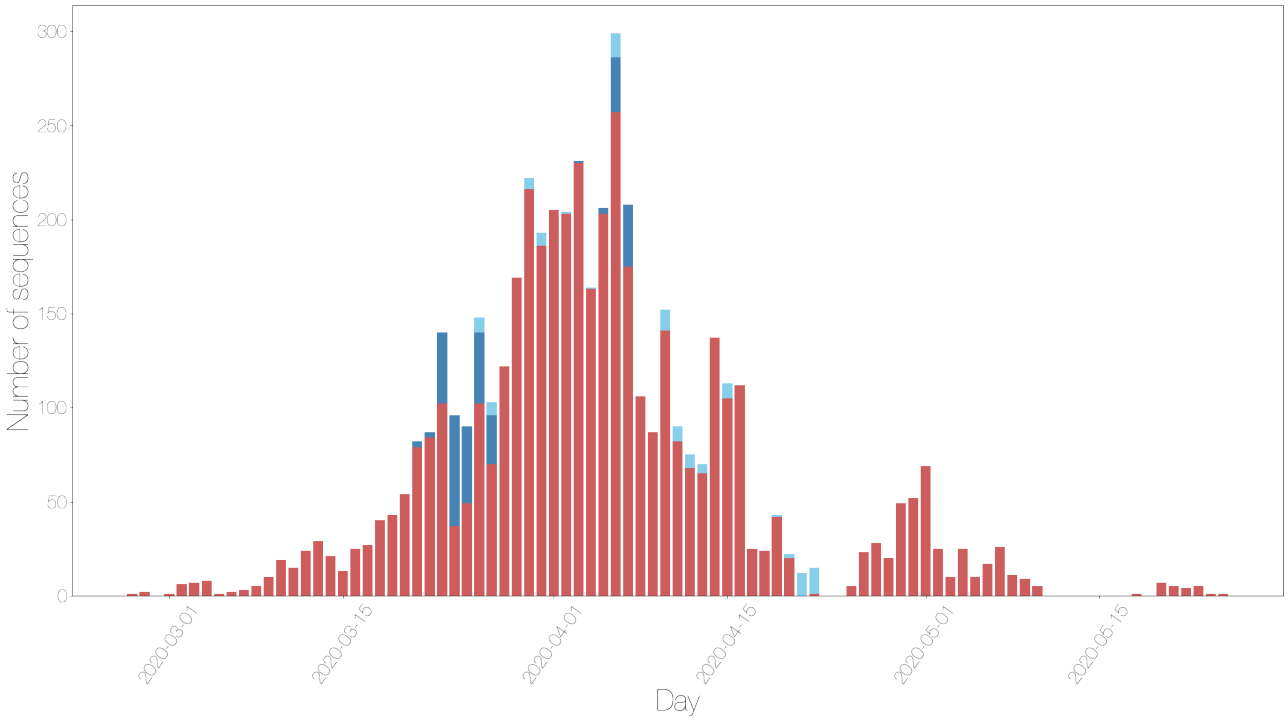

Figure 5: Sequences taken on each day by country

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.

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There are 415 sequences without enough geographical information to map
from this centre.
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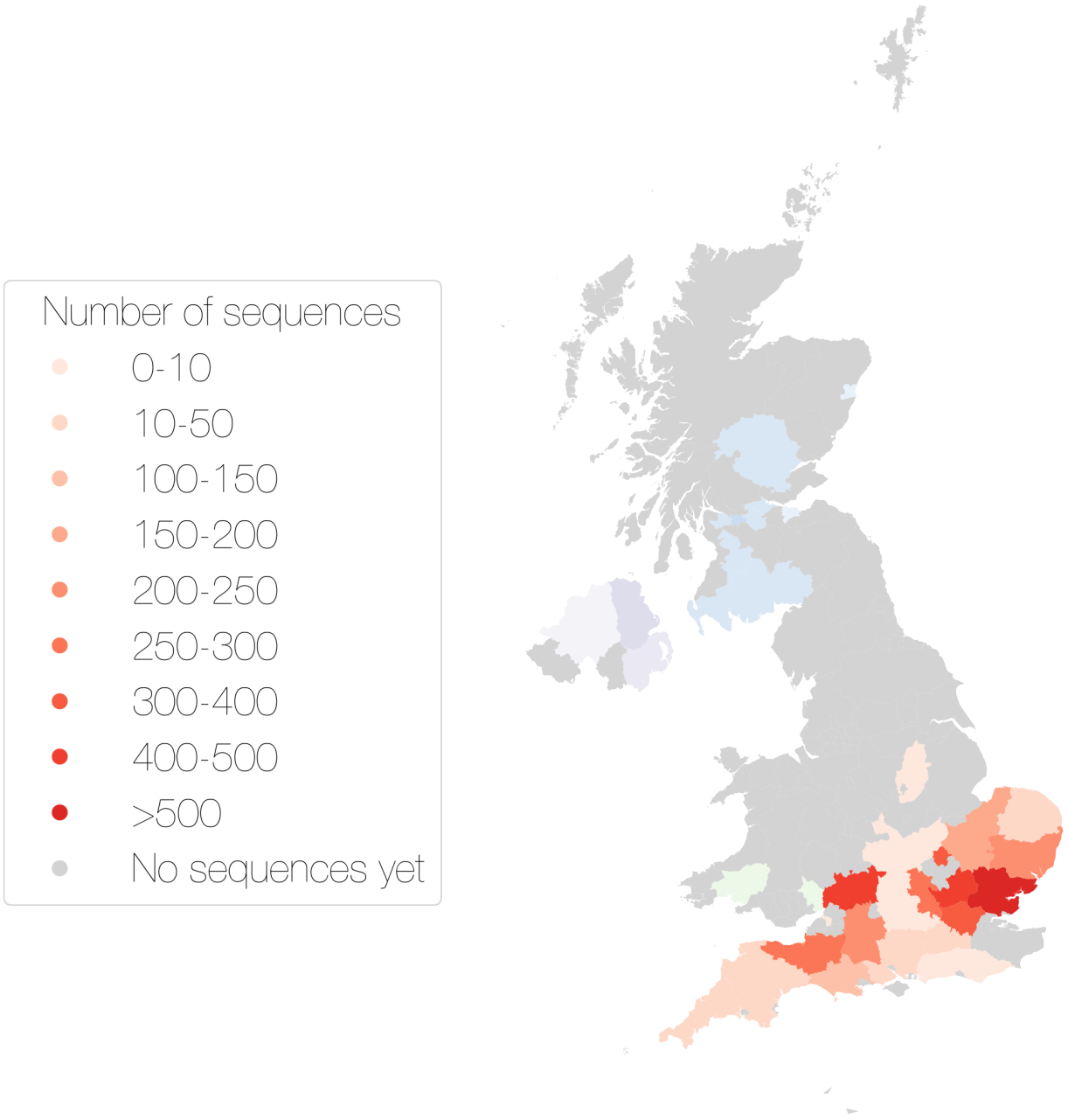

Figure 6: Map showing the number of sequences sampled by adm2 region

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

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

Table S1 Description of all lineages that have been circulating in the last month, and have more than 5 sequences.

Lineage name	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK5	313 (96.9%)	9 (2.79%)	1 (0.31%)	Mar-07, May-25	323	B.1.1.1	0	active today
UK2464	97 (84.35%)	18 (15.65%)	0 (0%)	Mar-12, May-01	115	B.1.p11	24	0.0183
UK9	93 (100.0%)	0 (0%)	0 (0%)	Mar-19, May-03	93	B.1.13	22	0.0222
UK494	68 (100.0%)	0 (0%)	0 (0%)	Mar-21, May-01	68	B.1.p11	24	0.0255
UK177	56 (100.0%)	0 (0%)	0 (0%)	Mar-27, May-01	56	B.1.1	24	0.0265
UK115	53 (100.0%)	0 (0%)	0 (0%)	Mar-17, Apr-20	53	B.2.1	35	0.0187
UK66	52 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-01	52	B.1.1.8	24	0.0359
UK2916	47 (97.92%)	0 (0%)	1 (2.08%)	Feb-27, May-10	48	B.1	15	0.1035
UK2913	46 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-30	46	B.1.p11	25	0.04
UK26	37 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-06	37	B.1.1.3	19	0.0716
UK346	34 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-19	34	B.1.72, B.1	36	0.0286
UK4	32 (96.97%)	0 (0%)	1 (3.03%)	Mar-11, Apr-14	33	B	41	0.0259
UK19	33 (100.0%)	0 (0%)	0 (0%)	Mar-14, May-10	33	B.1	15	0.1188
UK63	33 (100.0%)	0 (0%)	0 (0%)	Mar-28, Apr-30	33	B.1.1	25	0.0412
UK760	0 (0%)	0 (0%)	32 (100.0%)	Mar-27, Apr-22	32	B.1.1	33	0.0254
UK28	31 (100.0%)	0 (0%)	0 (0%)	Mar-26, May-01	31	B.1.1.10	24	0.05
UK40	0 (0%)	31 (100.0%)	0 (0%)	Mar-21, Apr-07	31	B.16	48	0.0118
UK112	30 (100.0%)	0 (0%)	0 (0%)	Mar-21, May-04	30	B.1.1	21	0.0722
UK13	30 (100.0%)	0 (0%)	0 (0%)	Mar-13, May-09	30	B.1.1	16	0.1228
UK371	30 (100.0%)	0 (0%)	0 (0%)	Mar-29, May-09	30	B.1.1	16	0.0884
UK31	28 (100.0%)	0 (0%)	0 (0%)	Mar-21, May-06	28	B.1	19	0.0897
UK37	28 (100.0%)	0 (0%)	0 (0%)	Mar-17, May-04	28	B.1.30	21	0.0847
UK138	27 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-17	27	B.2.1	38	0.0253
UK79	25 (100.0%)	0 (0%)	0 (0%)	Mar-24, May-04	25	B.1	21	0.0813
UK8	24 (100.0%)	0 (0%)	0 (0%)	Mar-10, Apr-08	24	B	47	0.0268
UK36	10 (41.67%)	13 (54.17%)	1 (4.17%)	Mar-19, Apr-14	24	B.1	41	0.0276

Lineage name	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK3035	23 (100.0%)	0 (0%)	0 (0%)	Mar-24, May-08	23	B.1	17	0.1203
UK81	22 (100.0%)	0 (0%)	0 (0%)	Mar-19, Apr-27	22	B.1.1	28	0.0663
UK5098	0 (0%)	21 (100.0%)	0 (0%)	Mar-23, Apr-07	21	B.1.p73	48	0.0156
UK114	20 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-13	20	B.1.1	42	0.0351
UK109	20 (100.0%)	0 (0%)	0 (0%)	Mar-21, May-01	20	B.1.5	24	0.0899
UK61	20 (100.0%)	0 (0%)	0 (0%)	Mar-12, Apr-18	20	B.3	37	0.0526
UK158	19 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-19	19	B.1.1	36	0.0417
UK339	17 (89.47%)	2 (10.53%)	0 (0%)	Mar-14, Apr-16	19	B.3	39	0.047
UK51	18 (94.74%)	1 (5.26%)	0 (0%)	Mar-26, May-08	19	B.1.36	17	0.1405
UK3	18 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-05	18	B.1	20	0.1412
UK39	0 (0%)	18 (100.0%)	0 (0%)	Mar-24, Apr-07	18	A.2	48	0.0172
UK5675	18 (100.0%)	0 (0%)	0 (0%)	Mar-22, Apr-01	18	B.2	54	0.0109
UK77	18 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-26	18	B.2	29	0.069
UK276	17 (100.0%)	0 (0%)	0 (0%)	Mar-18, Apr-16	17	B.1.1	39	0.0465
UK2735	13 (76.47%)	1 (5.88%)	3 (17.65%)	Mar-24, May-07	17	B.1.1	18	0.1528
UK225	0 (0%)	17 (100.0%)	0 (0%)	Mar-21, Apr-07	17	B.2	48	0.0221
UK5741	16 (100.0%)	0 (0%)	0 (0%)	Mar-30, Apr-19	16	B.1	36	0.037
UK274	16 (100.0%)	0 (0%)	0 (0%)	Mar-15, Apr-08	16	B.3	47	0.034
UK101	16 (100.0%)	0 (0%)	0 (0%)	Mar-21, Apr-26	16	B.1.5	29	0.0828
UK33	15 (100.0%)	0 (0%)	0 (0%)	Mar-30, May-08	15	B.1.1	17	0.1639
UK5309	15 (100.0%)	0 (0%)	0 (0%)	Mar-25, Apr-29	15	B.1.1.10, B.1.1	26	0.0962
UK183	15 (100.0%)	0 (0%)	0 (0%)	Mar-29, Apr-15	15	B.1.1	40	0.0304
UK179	14 (100.0%)	0 (0%)	0 (0%)	Mar-26, Apr-18	14	B.1.1.p11	37	0.0478
UK254	14 (100.0%)	0 (0%)	0 (0%)	Mar-20, Apr-14	14	B.1.1	41	0.0469
UK126	14 (100.0%)	0 (0%)	0 (0%)	Mar-29, May-01	14	B.1.1	24	0.1058
UK632	14 (100.0%)	0 (0%)	0 (0%)	Mar-25, Apr-18	14	B.1.1	37	0.0499
UK128	13 (100.0%)	0 (0%)	0 (0%)	Apr-03, May-07	13	B.1.1	18	0.1574
UK397	13 (100.0%)	0 (0%)	0 (0%)	Mar-28, Apr-14	13	B.1.1.13	41	0.0346
UK72	3 (23.08%)	0 (0%)	10 (76.92%)	Mar-13, Apr-21	13	B.10	34	0.0956

Lineage name	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK173	13 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-11	13	B	44	0.0492
UK5498	13 (100.0%)	0 (0%)	0 (0%)	Apr-01, Apr-20	13	B.2	35	0.0452
UK23	12 (92.31%)	1 (7.69%)	0 (0%)	Mar-18, Apr-03	13	B.9, B	52	0.0256
UK3021	12 (100.0%)	0 (0%)	0 (0%)	Mar-16, Apr-16	12	B.1	39	0.0723
UK146	12 (100.0%)	0 (0%)	0 (0%)	Apr-01, May-07	12	B.1.1	18	0.1818
UK214	12 (100.0%)	0 (0%)	0 (0%)	Mar-14, May-01	12	B.1.1	24	0.1818
UK569	12 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-14	12	B.1.1	41	0.0488
UK637	12 (100.0%)	0 (0%)	0 (0%)	Mar-28, May-01	12	B.1.1	24	0.1288
UK368	11 (100.0%)	0 (0%)	0 (0%)	Mar-18, May-01	11	B.1	24	0.1833
UK5260	11 (100.0%)	0 (0%)	0 (0%)	Apr-05, May-02	11	B.1.1	23	0.1174
UK103	11 (100.0%)	0 (0%)	0 (0%)	Mar-30, May-04	11	B.1.1	21	0.1667
UK5339	11 (100.0%)	0 (0%)	0 (0%)	Apr-15, Apr-29	11	B.1.1	26	0.0538
UK18	11 (100.0%)	0 (0%)	0 (0%)	Mar-12, May-03	11	B.1.1.7	22	0.2364
UK726	11 (100.0%)	0 (0%)	0 (0%)	Apr-04, May-01	11	B.1	24	0.1125
UK174	11 (100.0%)	0 (0%)	0 (0%)	Mar-19, May-02	11	B.1.5	23	0.1913
UK354	10 (100.0%)	0 (0%)	0 (0%)	Mar-28, Apr-07	10	B.1.1	48	0.0231
UK513	10 (100.0%)	0 (0%)	0 (0%)	Apr-03, Apr-11	10	B.1.p11	44	0.0202
UK134	10 (100.0%)	0 (0%)	0 (0%)	Mar-09, Apr-07	10	B.1	48	0.0671
UK88	0 (0%)	10 (100.0%)	0 (0%)	Mar-23, Apr-07	10	B.1	48	0.0347
UK5713	10 (100.0%)	0 (0%)	0 (0%)	Mar-26, Apr-14	10	B.1.1, B.2	41	0.0515
UK2045	10 (100.0%)	0 (0%)	0 (0%)	Mar-17, Apr-29	10	B, B.1	26	0.1838
UK241	10 (100.0%)	0 (0%)	0 (0%)	Mar-22, Apr-16	10	B.1.5.3	39	0.0712
UK6	10 (100.0%)	0 (0%)	0 (0%)	Mar-17, Apr-14	10	B.1	41	0.0759
UK132	8 (88.89%)	1 (11.11%)	0 (0%)	Mar-27, Apr-29	9	B.1	26	0.1587
UK12	8 (88.89%)	0 (0%)	1 (11.11%)	Mar-22, Apr-13	9	B.1.p11	42	0.0655
UK5649	9 (100.0%)	0 (0%)	0 (0%)	Apr-04, Apr-19	9	B.2.6	36	0.0521
UK5338	9 (100.0%)	0 (0%)	0 (0%)	Apr-29, May-02	9	B.1.1	23	0.0163
UK123	9 (100.0%)	0 (0%)	0 (0%)	Mar-23, May-01	9	B.1	24	0.2031
UK2013	9 (100.0%)	0 (0%)	0 (0%)	Mar-29, Apr-26	9	B.1	29	0.1207

Lineage name	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK95	9 (100.0%)	0 (0%)	0 (0%)	Mar-17, Apr-05	9	B.2.1	50	0.0475
UK58	6 (66.67%)	3 (33.33%)	0 (0%)	Mar-17, Apr-09	9	B.1	46	0.0625
UK5409	9 (100.0%)	0 (0%)	0 (0%)	Mar-27, Apr-19	9	B.1.1	36	0.0799
UK2200	3 (33.33%)	6 (66.67%)	0 (0%)	Mar-20, Apr-07	9	B.1.5.6, B.1.5	48	0.0469
UK5707	7 (77.78%)	0 (0%)	2 (22.22%)	Mar-18, Apr-15	9	B.1.1, B.2	40	0.0875
UK5672	9 (100.0%)	0 (0%)	0 (0%)	Mar-19, Apr-04	9	B.2	51	0.0392
UK441	9 (100.0%)	0 (0%)	0 (0%)	Apr-04, May-01	9	B.1.1	24	0.1406
UK318	8 (100.0%)	0 (0%)	0 (0%)	Mar-20, Apr-10	8	B	45	0.0667
UK62	8 (100.0%)	0 (0%)	0 (0%)	Mar-24, Apr-09	8	B.3	46	0.0497
UK645	8 (100.0%)	0 (0%)	0 (0%)	Mar-29, Apr-08	8	B.2.1	47	0.0304
UK291	8 (100.0%)	0 (0%)	0 (0%)	Mar-13, Apr-05	8	B.2.1	50	0.0657
UK163	8 (100.0%)	0 (0%)	0 (0%)	Mar-27, Apr-07	8	B.1.1	48	0.0327
UK86	8 (100.0%)	0 (0%)	0 (0%)	Mar-23, Mar-30	8	B.1	56	0.0179
UK53	8 (100.0%)	0 (0%)	0 (0%)	Apr-02, Apr-16	8	B.1.1.4	39	0.0513
UK341	8 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-12	8	B.1	43	0.0664
UK45	7 (87.5%)	1 (12.5%)	0 (0%)	Mar-26, Apr-15	8	B.1.1	40	0.0714
UK251	8 (100.0%)	0 (0%)	0 (0%)	Mar-26, May-02	8	B.1.1	23	0.2298
UK2904	0 (0%)	0 (0%)	8 (100.0%)	Apr-06, Apr-22	8	B.1.p11	33	0.0693
UK64	8 (100.0%)	0 (0%)	0 (0%)	Apr-01, Apr-15	8	B.1	40	0.05
UK42	8 (100.0%)	0 (0%)	0 (0%)	Mar-28, Apr-28	8	B.1, B.1.35	27	0.164
UK759	8 (100.0%)	0 (0%)	0 (0%)	Mar-28, Apr-04	8	B.1.1	51	0.0196
UK30	7 (100.0%)	0 (0%)	0 (0%)	Mar-23, May-02	7	B.1.1	23	0.2899
UK67	7 (100.0%)	0 (0%)	0 (0%)	Apr-26, May-04	7	B.1.1	21	0.0635
UK195	7 (100.0%)	0 (0%)	0 (0%)	Mar-31, May-03	7	B.1.1	22	0.25
UK913	7 (100.0%)	0 (0%)	0 (0%)	Apr-03, Apr-29	7	B.1	26	0.1667
UK119	7 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-07	7	B.2.5	48	0.0521
UK1006	7 (100.0%)	0 (0%)	0 (0%)	Apr-04, Apr-29	7	B.1.1	26	0.1603
UK511	7 (100.0%)	0 (0%)	0 (0%)	Apr-05, Apr-29	7	B.1.1	26	0.1538
UK253	7 (100.0%)	0 (0%)	0 (0%)	Apr-10, May-03	7	B.1.1	22	0.1742

Lineage name	England	Scotland	Northern Ireland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK564	7 (100.0%)	0 (0%)	0 (0%)	Apr-03, May-02	7	B.1.1	23	0.2101
UK5523	7 (100.0%)	0 (0%)	0 (0%)	May-01, May-23	7	B.1	2	1.8333
UK5174	6 (85.71%)	0 (0%)	1 (14.29%)	Mar-26, Apr-07	7	B.1.1.7	48	0.0417
UK190	7 (100.0%)	0 (0%)	0 (0%)	Mar-18, Apr-06	7	B.1	49	0.0646
UK659	6 (100.0%)	0 (0%)	0 (0%)	Mar-21, Mar-30	6	B	56	0.0321
UK70	5 (83.33%)	0 (0%)	1 (16.67%)	Mar-28, Apr-16	6	B.2	39	0.0974
UK46	6 (100.0%)	0 (0%)	0 (0%)	Mar-14, Apr-16	6	B.2.1	39	0.1692
UK92	6 (100.0%)	0 (0%)	0 (0%)	Mar-31, Apr-16	6	B.1.1	39	0.0821
UK444	3 (50.0%)	0 (0%)	3 (50.0%)	Mar-31, Apr-21	6	B.1.1	34	0.1235
UK552	2 (33.33%)	4 (66.67%)	0 (0%)	Mar-23, Mar-29	6	A.1	57	0.0211
UK510	6 (100.0%)	0 (0%)	0 (0%)	Apr-02, Apr-16	6	B.1.1	39	0.0718
UK517	6 (100.0%)	0 (0%)	0 (0%)	Mar-29, Apr-12	6	B.1.1	43	0.0651
UK44	0 (0%)	6 (100.0%)	0 (0%)	Mar-23, Mar-26	6	B	60	0.01
UK512	6 (100.0%)	0 (0%)	0 (0%)	Mar-30, Apr-13	6	B.1.1	42	0.0667
UK541	6 (100.0%)	0 (0%)	0 (0%)	Apr-01, Apr-12	6	B.1.1	43	0.0512
UK329	5 (83.33%)	1 (16.67%)	0 (0%)	Mar-24, May-07	6	B.1.1	18	0.4889
UK237	6 (100.0%)	0 (0%)	0 (0%)	Mar-31, May-07	6	B.1.1	18	0.4111
UK746	6 (100.0%)	0 (0%)	0 (0%)	Mar-31, Apr-14	6	B.1.5	41	0.0683
UK5084	6 (100.0%)	0 (0%)	0 (0%)	Mar-31, Apr-15	6	B.1	40	0.075
UK255	5 (83.33%)	1 (16.67%)	0 (0%)	Apr-03, Apr-16	6	B.1.1	39	0.0667
UK566	6 (100.0%)	0 (0%)	0 (0%)	Apr-03, Apr-15	6	B.1.1.10	40	0.06
UK330	6 (100.0%)	0 (0%)	0 (0%)	Mar-23, Apr-13	6	B.1.1	42	0.1
UK634	6 (100.0%)	0 (0%)	0 (0%)	Mar-30, Apr-18	6	B.1.1	37	0.1027
UK287	6 (100.0%)	0 (0%)	0 (0%)	Mar-31, Apr-06	6	B.1	49	0.0245

Table S2 Raw data for figure two showing lags between the most recent sequence and current date for each sequencing centre

	Centre	Lag in days
0	SANG	11

Table S3 Raw data for figure three showing the number of admin2 regions a lineage is present in over time

Week commencing	UK5	UK2464	UK9	UK494	UK177	UK66	UK2916	UK2913	UK26	UK63
2020-02-23	0	0	0	0	0	0	2	0	0	0
2020-03-01	1	0	0	0	0	0	3	0	0	0
2020-03-08	6	1	0	0	0	0	3	0	0	0
2020-03-15	6	4	2	1	0	2	5	1	1	0
2020-03-22	13	11	3	3	1	2	4	6	0	1
2020-03-29	16	9	10	7	3	5	5	7	1	7
2020-04-05	13	10	7	4	6	5	5	4	1	5
2020-04-12	12	6	6	3	4	3	1	3	2	2
2020-04-19	4	0	0	1	0	2	0	0	0	0
2020-04-26	11	3	1	2	3	2	1	2	3	2
2020-05-03	6	0	1	0	0	0	1	0	1	0
2020-05-10	0	0	0	0	0	0	1	0	0	0
2020-05-17	3	0	0	0	0	0	0	0	0	0
2020-05-24	1	0	0	0	0	0	0	0	0	0

Table S4 is not appropriate for this report and so has been omitted.

Table S5 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
2020-02-27	0	1	1
2020-02-28	1	0	1
2020-03-01	1	0	1
2020-03-02	3	0	3
2020-03-03	4	1	5
2020-03-04	2	3	5
2020-03-05	1	0	1
2020-03-06	2	0	2
2020-03-07	0	2	2
2020-03-08	2	1	3
2020-03-09	7	2	9
2020-03-10	8	3	11
2020-03-11	10	4	14
2020-03-12	12	6	18
2020-03-13	14	6	20
2020-03-14	11	8	19
2020-03-15	5	4	9
2020-03-16	11	10	21
2020-03-17	8	12	20
2020-03-18	14	14	28
2020-03-19	17	13	30
2020-03-20	29	10	39
2020-03-21	46	15	61
2020-03-22	38	9	47
2020-03-23	53	29	82
2020-03-24	37	9	46
2020-03-25	30	11	41
2020-03-26	39	25	64
2020-03-27	31	11	42
2020-03-28	42	20	62
2020-03-29	60	23	83
2020-03-30	75	24	99
2020-03-31	54	25	79
2020-04-01	74	17	91
2020-04-02	78	18	96
2020-04-03	70	18	88
2020-04-04	47	12	59
2020-04-05	68	13	81
2020-04-06	94	8	102
2020-04-07	38	8	46
2020-04-08	33	3	36
2020-04-09	16	5	21
2020-04-10	35	5	40
2020-04-11	20	3	23
2020-04-12	16	2	18
2020-04-13	18	4	22
2020-04-14	17	2	19
2020-04-15	23	4	27
2020-04-16	21	5	26
2020-04-17	7	0	7
2020-04-18	1	1	2
2020-04-19	6	0	6
2020-04-20	2	0	2
2020-04-21	2	0	2
2020-04-22	2	0	2
2020-04-25	1	0	1
2020-04-26	1	3	4

Day	Number of singleton starts	Number of non-singleton starts	Total
2020-04-27	3	0	3
2020-04-28	6	0	6
2020-04-29	6	3	9
2020-04-30	4	2	6
2020-05-01	12	4	16
2020-05-02	3	0	3
2020-05-03	1	0	1
2020-05-04	3	0	3
2020-05-06	5	0	5
2020-05-07	3	2	5
2020-05-08	1	0	1
2020-05-10	1	0	1

Table S6 Raw data for figure six showing the number of sequences taken over time.

Day	England	Scotland	Northern Ireland
2020-02-27	1	0	0
2020-02-28	2	0	0
2020-03-01	1	0	0
2020-03-02	6	0	0
2020-03-03	7	0	0
2020-03-04	8	0	0
2020-03-05	1	0	0
2020-03-06	2	0	0
2020-03-07	3	0	0
2020-03-08	5	0	0
2020-03-09	10	0	0
2020-03-10	19	0	0
2020-03-11	15	0	0
2020-03-12	24	0	0
2020-03-13	29	0	0
2020-03-14	21	0	0
2020-03-15	13	0	0
2020-03-16	25	0	0
2020-03-17	27	0	0
2020-03-18	40	0	0
2020-03-19	43	0	0
2020-03-20	54	0	0
2020-03-21	79	3	0
2020-03-22	84	3	0
2020-03-23	102	38	0
2020-03-24	37	59	0
2020-03-25	49	41	0
2020-03-26	102	38	8
2020-03-27	70	26	7
2020-03-28	122	0	0
2020-03-29	169	0	0
2020-03-30	216	0	6
2020-03-31	186	0	7
2020-04-01	205	0	0
2020-04-02	203	0	1
2020-04-03	230	1	0
2020-04-04	163	0	1
2020-04-05	203	3	0
2020-04-06	257	29	13
2020-04-07	175	33	0
2020-04-08	106	0	0
2020-04-09	87	0	0
2020-04-10	141	0	11
2020-04-11	82	0	8
2020-04-12	68	0	7
2020-04-13	65	0	5
2020-04-14	137	0	0
2020-04-15	105	0	8
2020-04-16	112	0	0
2020-04-17	25	0	0
2020-04-18	24	0	0
2020-04-19	42	0	1
2020-04-20	20	0	2
2020-04-21	0	0	12
2020-04-22	1	0	14
2020-04-25	5	0	0
2020-04-26	23	0	0

Day	England	Scotland	Northern Ireland
2020-04-27	28	0	0
2020-04-28	20	0	0
2020-04-29	49	0	0
2020-04-30	52	0	0
2020-05-01	69	0	0
2020-05-02	25	0	0
2020-05-03	10	0	0
2020-05-04	25	0	0
2020-05-05	10	0	0
2020-05-06	17	0	0
2020-05-07	26	0	0
2020-05-08	11	0	0
2020-05-09	9	0	0
2020-05-10	5	0	0
2020-05-18	1	0	0
2020-05-20	7	0	0
2020-05-21	5	0	0
2020-05-22	4	0	0
2020-05-23	5	0	0
2020-05-24	1	0	0
2020-05-25	1	0	0

Table S7 Raw data for the figure seven with the number of sequences assigned to each admin2 region.

Admin2	Country	Number of sequences	Sequence group
ABERDEEN	Scotland	1	1-10
ANTRIM	Northern Ireland	56	50-100
BEDFORDSHIRE	England	372	300-400
BERKSHIRE	England	1	1-10
BRISTOL	England	2	1-10
BUCKINGHAMSHIRE	England	261	250-300
CAMBRIDGESHIRE	England	181	150-200
CARMARTHENSHIRE	Wales	1	1-10
CORNWALL	England	16	10-50
DEVON	England	33	10-50
DORSET	England	142	100-150
DOWN	Northern Ireland	44	10-50
DUMFRIES AND GALLOWAY	Scotland	15	10-50
EAST AYRSHIRE	Scotland	31	10-50
EDINBURGH	Scotland	1	1-10
ESSEX	England	865	>500
FALKIRK	Scotland	22	10-50
GLASGOW	Scotland	121	100-150
GLOUCESTERSHIRE	England	447	400-500
GREATER LONDON	England	386	300-400
HAMPSHIRE	England	22	10-50
HERTFORDSHIRE	England	475	400-500
LONDONDERRY	Northern Ireland	7	1-10
MONMOUTHSHIRE	Wales	1	1-10
NORFOLK	England	11	10-50
NORTH LANARKSHIRE	Scotland	32	10-50
NORTHAMPTONSHIRE	England	6	1-10
NOTTINGHAMSHIRE	England	3	1-10
OXFORDSHIRE	England	5	1-10
PERTHSHIRE AND KINROSS	Scotland	28	10-50
RENFREWSHIRE	Scotland	22	10-50
SOMERSET	England	283	250-300
SUFFOLK	England	248	200-250
SURREY	England	21	10-50
SUSSEX	England	1	1-10
TYRONE	Northern Ireland	4	1-10
WARWICKSHIRE	England	1	1-10
WILTSHIRE	England	231	200-250