# Covid-19 Modelling Results, as at 27 April 2020

### **CANADA**

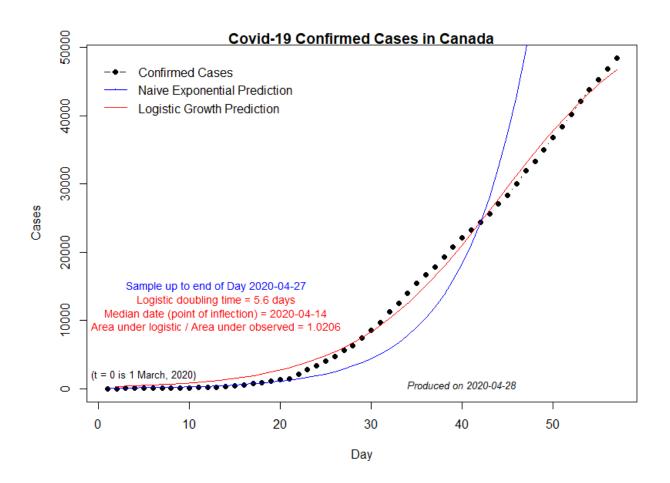
#### 1. Total Confirmed Cases

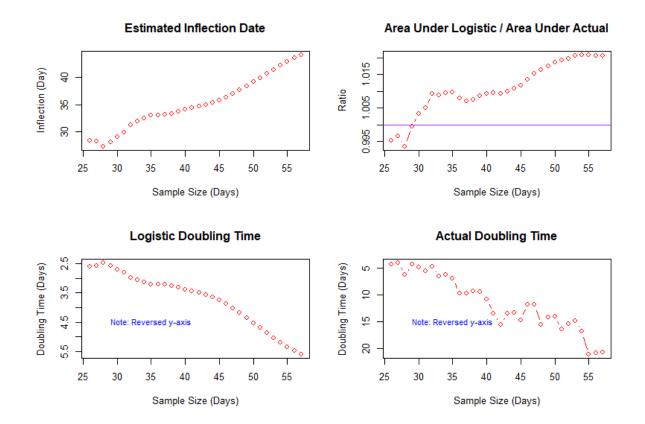
My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Canadian Covid-19 Cases.R

The code will automatically download the latest data from my github account.

The chart below shows results based on data from 2 March to 27 April inclusive.





### Projected Cases, Up to 1 Week Ahead

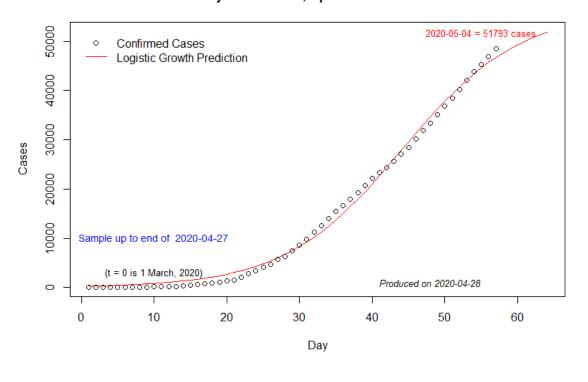


Table 1: Projected Covid-19 Cases in Canada (Projections are in Blue; Actual Values are in Brackets)

| Sample end (projection made): 20 April |  |                  |                  |                  |                  |                  |  |  |
|--|--|------------------|------------------|------------------|------------------|------------------|--|--|
| 21 Apr                                 | 22 Apr                                 | 23 Apr           | 24 Apr           | 25 Apr           | 26 Apr           | 27 Apr           |  |  |
| 35811<br>[38422]                       | 36536<br>[40190]                       | 37181<br>[42110] | 37753<br>[43888] | 38258<br>[45354] | 38702<br>[46895] | 39091<br>[48500] |  |  |
| Sample end (projection made): 21 April |  |                  |                  |                  |                  |                  |  |  |
| 22 Apr                                 | 23 Apr                                 | 24 Apr           | 25 Apr           | 26 Apr           | 27 Apr           | 28 Apr           |  |  |
| 37447<br>[40190]                       | 38196<br>[42110]                       | 38867<br>[43888] | 39464<br>[45354] | 39994<br>[46895] | 40463<br>[48500] | 40877            |  |  |
| Sample end (                           | (projection mad                        | de): 22 April    |                  |                  |                  |                  |  |  |
| 23 Apr                                 | 24 Apr                                 | 25 Apr           | 26 Apr           | 27 Apr           | 28 Apr           | 29 Apr           |  |  |
| 39135<br>[42110]                       | 39911<br>[43888]                       | 40609<br>[45354] | 41234<br>[46895] | 41791<br>[48500] | 42287            | 42727            |  |  |
| Sample end (                           | (projection mad                        | de): 23 April    |                  |                  |                  |                  |  |  |
| 24 Apr                                 | 25 Apr                                 | 26 Apr           | 27 Apr           | 28 Apr           | 29 Apr           | 30 Apr           |  |  |
| 40911<br>[43888]                       | 41720<br>[45354]                       | 42452<br>[46895] | 43110<br>[48500] | 43701            | 44229            | 44699            |  |  |
| Sample end (                           | projection mad                         | de): 24 April    |                  |                  |                  |                  |  |  |
| 25 Apr                                 | 26 Apr                                 | 27 Apr           | 28 Apr           | 29 Apr           | 30 Apr           | 1 May            |  |  |
| 42704<br>[45354]                       | 43543<br>[46895]                       | 44306<br>[48500] | 44996            | 45617            | 46176            | 4667             |  |  |
| Sample end (                           | Sample end (projection made): 25 April |                  |                  |                  |                  |                  |  |  |
| 26 Apr                                 | 27 Apr                                 | 28 Apr           | 29 Apr           | 30 Apr           | 1 May            | 2 May            |  |  |
| 44398<br>[46895]                       | 45253<br>[48500]                       | 46032            | 46739            | 47378            | 47954            | 48472            |  |  |

| Sample end | (projection made) | : 26 April |
|------------|-------------------|------------|
|------------|-------------------|------------|

| 27 Apr<br>46035<br>[48500] | 28 Apr<br>46896  | 29 Apr<br>47683 | <i>30 Apr</i><br>48398 | 1 May<br>49046 | 2 May<br>49632 | 3 May<br>50160 |
|----------------------------|------------------|-----------------|------------------------|----------------|----------------|----------------|
| Sample end                 | l (projection ma | de): 27 April   |                        |                |                |                |
| 28 Apr                     | 29 Apr           | 30 Apr          | 1 May                  | 2 May          | 3 May          | 4 May          |
| 47644                      | 48507            | 49296           | 50015                  | 50668          | 51259          | 51793          |

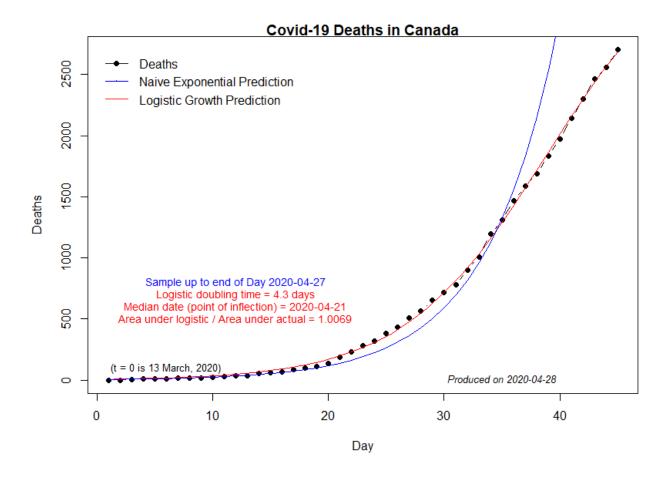
#### 2. Total Number of Deaths

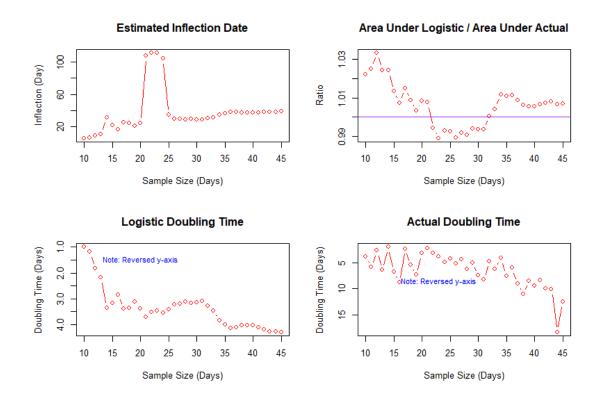
My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Canadian\_Covid-19\_Deaths.R

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The chart below shows results based on data from 14 March to 27 April inclusive.





### Projected Deaths, Up to 1 Week Ahead

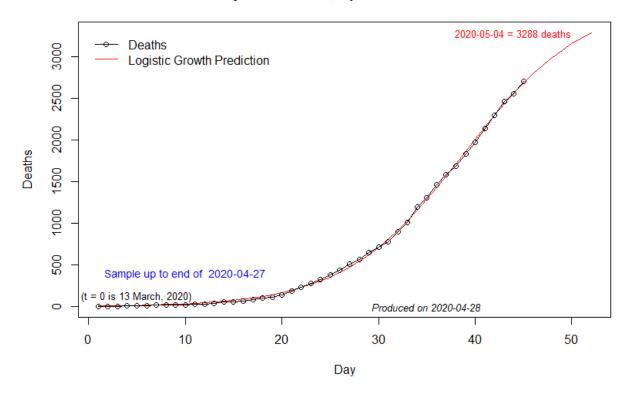


Table 2: Projected Covid-19 Deaths in Canada (Projections are in Red; Actual Values are in Brackets)

| Sample end (projection made): 20 April |                             |                             |                             |                |                             |                |  |  |  |
|--|-----------------------------|-----------------------------|-----------------------------|----------------|-----------------------------|----------------|--|--|--|
| 21 Apr                                 | 22 Apr                      | 23 Apr                      | 24 Apr                      | 25 Apr         | 26 Apr                      | 27 Apr         |  |  |  |
| 1842<br>[1834]                         | 1972<br>[1974]              | 2097<br>[2146]              | 2215<br>[2302]              | 2325<br>[2465] | 2427<br>[2560]              | 2520<br>[2707] |  |  |  |
| Sample end (p                          | rojection made)             | ): 21 April                 |                             |                |                             |                |  |  |  |
| 22 Apr                                 | 23 Apr                      | 24 Apr                      | 25 Apr                      | 26 Apr         | 27 Apr                      | 28 Apr         |  |  |  |
| 1966<br>[1974]                         | 2089<br>[2146]              | 2205<br>[2302]              | 2313<br>[2465]              | 2413<br>[2560] | <mark>2504</mark><br>[2707] | 2586           |  |  |  |
| Sample end (p                          | rojection made)             | ): 22 April                 |                             |                |                             |                |  |  |  |
| 23 Apr                                 | 24 Apr                      | 25 Apr                      | 26 Apr                      | 27 Apr         | 28 Apr                      | 29 Apr         |  |  |  |
| <mark>2094</mark><br>[2146]            | <mark>2211</mark><br>[2302] | 2321<br>[2465]              | <mark>2422</mark><br>[2560] | 2514<br>[2707] | 2597                        | 2672           |  |  |  |
| Sample end (p                          | rojection made)             | ): 23 April                 |                             |                |                             |                |  |  |  |
| 24 Apr                                 | 25 Apr                      | 26 Apr                      | 27 Apr                      | 28 Apr         | 29 Apr                      | 30 Apr         |  |  |  |
| 2243<br>[2302]                         | 2361<br>[2465]              | 2470<br>[2560]              | 2570<br>[2707]              | 2662           | 2745                        | 2818           |  |  |  |
| Sample end (p                          | rojection made)             | ): 24 April                 |                             |                |                             |                |  |  |  |
| 25 Apr                                 | 26 Apr                      | 27 Apr                      | 28 Apr                      | 29 Apr         | 30 Apr                      | 1 May          |  |  |  |
| 2395<br>[2465]                         | 2513<br>[2560]              | <mark>2622</mark><br>[2707] | 2721                        | 2812           | 2894                        | 2967           |  |  |  |
| Sample end (p                          | rojection made)             | ): 25 April                 |                             |                |                             |                |  |  |  |
| 26 Apr                                 | 27 Apr                      | 28 Apr                      | 29 Apr                      | 30 Apr         | 1 May                       | 2 May          |  |  |  |
| 2552<br>[2560]                         | <mark>2670</mark><br>[2707] | 2779                        | 2878                        | 2969           | 3050                        | 3123           |  |  |  |
| Sample end (p                          | rojection made)             | ): 26 April                 |                             |                |                             |                |  |  |  |
| 27 Apr                                 | 28 Apr                      | 29 Apr                      | 30 Apr                      | 1 May          | 2 May                       | 3 May          |  |  |  |
| 2673<br>[2707]                         | 2783                        | 2884                        | 2975                        | 3057           | 3131                        | 3196           |  |  |  |

# Sample end (projection made): 27 April

| 28 Apr | 29 Apr | 30 Apr | 1 May | 2 May | 3 May | 4 May |
|--------|--------|--------|-------|-------|-------|-------|
| 2799   | 2903   | 2997   | 3083  | 3159  | 3228  | 3288  |

#### **ONTARIO**

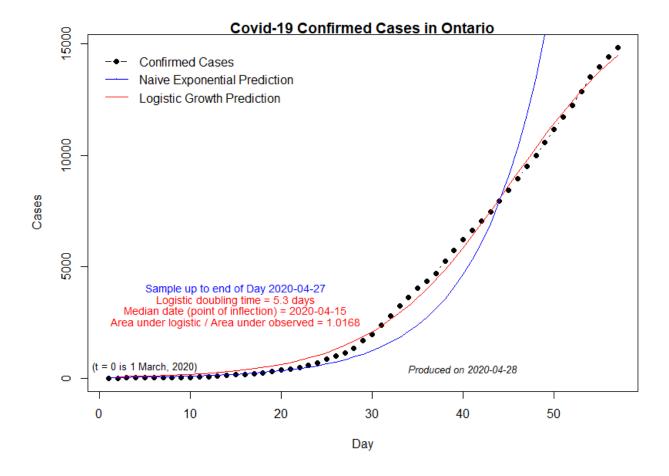
#### 1. Total Confirmed Cases

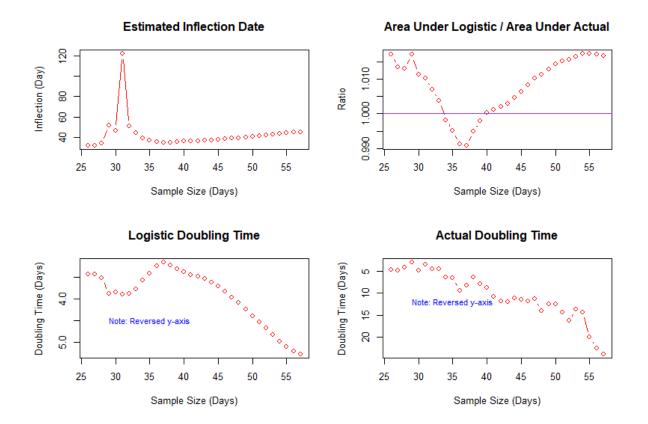
My R code for Covid-19 modelling is at

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The chart below shows results based on data from 2 March to 27 April inclusive.





### Projected Ontario Cases, Up to 1 Week Ahead

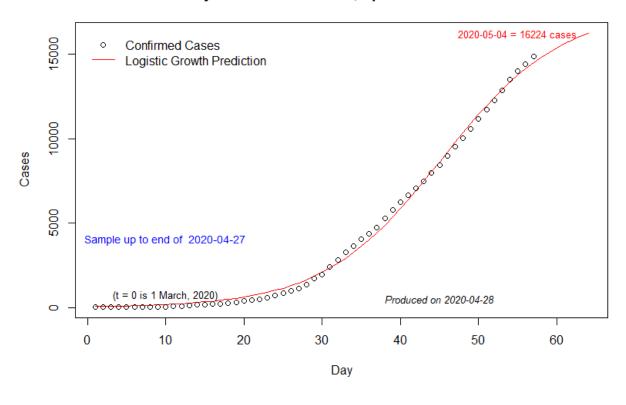


Table 3: Projected Covid-19 Cases in Ontario
(Projections are in Blue; Actual Values are in Brackets)

| Sample end       | (projection ma                         | de): 20 April    |                  |                  |                  |                  |  |
|------------------|--|------------------|------------------|------------------|------------------|------------------|--|
| 21 Apr           | 22 Apr                                 | 23 Apr           | 24 Apr           | 25 Apr           | 26 Apr           | 27 Apr           |  |
| 11037<br>[11735] | 11318<br>[12245]                       | 11569<br>[12879] | 11793<br>[13519] | 11991<br>[13995] | 12165<br>[14432] | 12318<br>[14856] |  |
| Sample end       | (projection ma                         | de): 21 April    |                  |                  |                  |                  |  |
| 22 Apr           | 23 Apr                                 | 24 Apr           | 25 Apr           | 26 Apr           | 27 Apr           | 28 Apr           |  |
| 11591<br>[12245] | 11879<br>[12879]                       | 12139<br>[13519] | 12370<br>[13995] | 12576<br>[14432] | 12759<br>[14856] | 12919            |  |
| Sample end       | (projection ma                         | de): 22 April    |                  |                  |                  |                  |  |
| 23 Apr           | 24 Apr                                 | 25 Apr           | 26 Apr           | 27 Apr           | 28 Apr           | 29 Apr           |  |
| 12127<br>[12879] | 12419<br>[13519]                       | 12682<br>[13995] | 12918<br>[14432] | 13129<br>[14856] | 13316            | 13481            |  |
| Sample end       | (projection ma                         | de): 23 April    |                  |                  |                  |                  |  |
| 24 Apr           | 25 Apr                                 | 26 Apr           | 27 Apr           | 28 Apr           | 29 Apr           | 30 Apr           |  |
| 12697<br>[13519] | 12995<br>[13995]                       | 13265<br>[14432] | 13509<br>[14856] | 13727            | 13921            | 14094            |  |
| Sample end       | (projection ma                         | de): 24 April    |                  |                  |                  |                  |  |
| 25 Apr           | 26 Apr                                 | 27 Apr           | 28 Apr           | 29 Apr           | 30 Apr           | 1 May            |  |
| 13292<br>[13995] | 13600<br>[14432]                       | 13879<br>[14856] | 14132            | 14359            | 14563            | 14745            |  |
| Sample end       | (projection ma                         | de): 25 April    |                  |                  |                  |                  |  |
| 26 Apr           | 27 Apr                                 | 28 Apr           | 29 Apr           | 30 Apr           | 1 May            | 2 May            |  |
| 13845<br>[14432] | 14155<br>[14856]                       | 14437            | 14692            | 14922            | 15129            | 15315            |  |
| Sample end       | Sample end (projection made): 26 April |                  |                  |                  |                  |                  |  |
| 27 Apr           | 28 Apr                                 | 29 Apr           | 30 Apr           | 1 May            | 2 May            | 3 May            |  |
| 14351<br>[14856] | 14656                                  | 14934            | 15186            | 15413            | 15618            | 15802            |  |

# Sample end (projection made): 27 April

| 28 Apr | 29 Apr | 30 Apr | 1 May | 2 May | 3 May | 4 May |
|--------|--------|--------|-------|-------|-------|-------|
| 14817  | 15113  | 15382  | 15626 | 15847 | 16045 | 16224 |

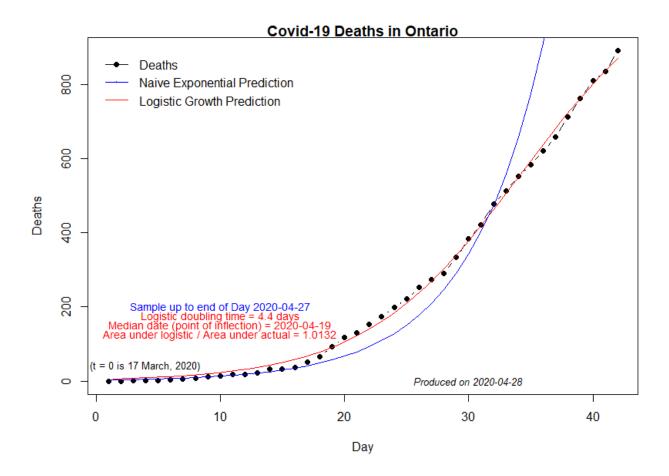
#### 2. Total Number of Deaths

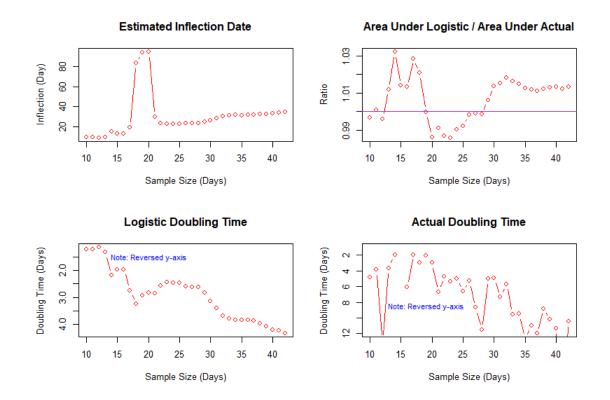
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## Projected Ontario Deaths, Up to 1 Week Ahead

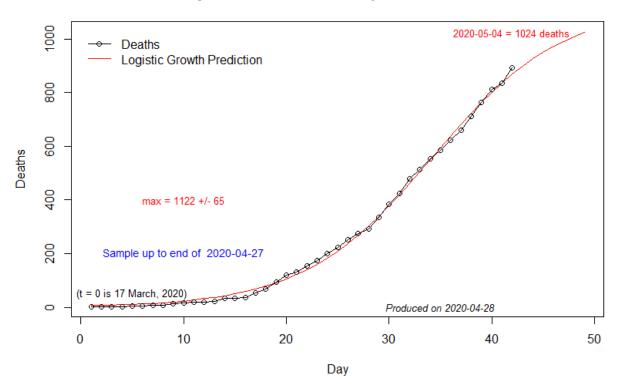


Table 4: Projected Covid-19 Deaths in Ontario

(Projections are in Red; Actual Values are in Brackets)

| Sample end<br>21 Apr      | l (projection ma<br>22 Apr | 23 April                  | 24 Apr                    | 25 Apr                    | 26 Apr              | 27 Apr              |  |
|---------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------|---------------------|--|
| <mark>619</mark><br>[622] | <mark>651</mark><br>[659]  | <mark>681</mark><br>[713] | <mark>709</mark><br>[763] | 733<br>[811]              | <b>755</b><br>[835] | <b>774</b><br>[892] |  |
| Sample end                | l (projection ma           | de): 21 April             |                           |                           |                     |                     |  |
| 22 Apr                    | 23 Apr                     | 24 Apr                    | 25 Apr                    | 26 Apr                    | 27 Apr              | 28 Apr              |  |
| 653<br>[659]              | 683<br>[713]               | <b>711</b><br>[763]       | 735<br>[811]              | <b>758</b><br>[835]       | <b>777</b><br>[892] | 794                 |  |
| Sample end                | l (projection ma           | de): 22 April             |                           |                           |                     |                     |  |
| 23 Apr                    | 24 Apr                     | 25 Apr                    | 26 Apr                    | 27 Apr                    | 28 Apr              | 29 Apr              |  |
| 686<br>[713]              | <mark>714</mark><br>[763]  | <mark>740</mark><br>[811] | <mark>762</mark><br>[835] | <mark>782</mark><br>[892] | 800                 | 815                 |  |
| Sample end                | l (projection ma           | de): 23 April             |                           |                           |                     |                     |  |
| 24 Apr                    | 25 Apr                     | 26 Apr                    | 27 Apr                    | 28 Apr                    | 29 Apr              | 30 Apr              |  |
| <mark>728</mark><br>[763] | 756<br>[811]               | <b>781</b><br>[835]       | <mark>804</mark><br>[892] | 824                       | 841                 | 857                 |  |
| Sample end                | l (projection ma           | de): 24 April             |                           |                           |                     |                     |  |
| 25 Apr                    | 26 Apr                     | 27 Apr                    | 28 Apr                    | 29 Apr                    | 30 Apr              | 1 May               |  |
| <mark>773</mark><br>[811] | <mark>802</mark><br>[835]  | <mark>828</mark><br>[892] | 851                       | 871                       | 889                 | 905                 |  |
| Sample end                | l (projection ma           | ide): 25 April            |                           |                           |                     |                     |  |
| 26 Apr                    | 27 Apr                     |                           | 29 Apr                    | 30 Apr                    | 1 May               | 2 May               |  |
| <mark>820</mark><br>[835] | <mark>849</mark><br>[892]  | 875                       | 899                       | 920                       | 938                 | 955                 |  |
| Sample end                | l (projection ma           | ide): 26 April            |                           |                           |                     |                     |  |
| 27 Apr                    | 28 Apr                     | 29 Apr                    | 30 Apr                    | 1 May                     | 2 May               | 3 Мау               |  |
| <mark>856</mark><br>[892] | 883                        | 908                       | 930                       | 949                       | 966                 | 982                 |  |

Sample end (projection made): 27 April

| 28 Apr | 29 Apr | 30 Apr | 1 May | 2 May | 3 May | 4 May |
|--------|--------|--------|-------|-------|-------|-------|
| 899    | 926    | 950    | 972   | 992   | 1009  | 1024  |