

RECEIVED: 29/08/2024



## APPENDIX 5-3

### COMPARATIVE SHADOW FLICKER REPORT

| House ID | ITM Coordinates (Easting) | ITM Coordinates (Northing) | Description | Participating Landowner | Distance to Nearest Turbine (metres) | Nearest Proposed Turbine No. | Max. Daily Shadow Flicker: Pre-Mitigation (hrs:min:sec) |                            |                                             | Max. Annual Shadow Flicker Adjusted for Average Regional Sunshine (hrs:min:sec) |                            |                                             | Max. Daily Shadow Flicker: Pre-Mitigation (hrs:min:sec) |                            |                                             | Max. Annual Shadow Flicker Adjusted for Average Regional Sunshine (hrs:min:sec) |                            |                                             |
|----------|---------------------------|----------------------------|-------------|-------------------------|--------------------------------------|------------------------------|---------------------------------------------------------|----------------------------|---------------------------------------------|---------------------------------------------------------------------------------|----------------------------|---------------------------------------------|---------------------------------------------------------|----------------------------|---------------------------------------------|---------------------------------------------------------------------------------|----------------------------|---------------------------------------------|
|          |                           |                            |             |                         |                                      |                              | Lowest Hub (102.5m) & Longest Blade (77.5m)             | Hub (105m) & Blade (74.5m) | Highest Hub (105m) & Shortest Blade (77.5m) | Lowest Hub (102.5m) & Longest Blade (77.5m)                                     | Hub (105m) & Blade (74.5m) | Highest Hub (105m) & Shortest Blade (77.5m) | Lowest Hub (102.5m) & Longest Blade (77.5m)             | Hub (105m) & Blade (74.5m) | Highest Hub (105m) & Shortest Blade (77.5m) | Lowest Hub (102.5m) & Longest Blade (77.5m)                                     | Hub (105m) & Blade (74.5m) | Highest Hub (105m) & Shortest Blade (77.5m) |
|          |                           |                            |             |                         |                                      |                              | Maximum Rotor Diameter (155m)                           | Rotor Diameter (149m)      | Rotor Diameter (150m)                       | Maximum Rotor Diameter (155m)                                                   | Rotor Diameter (149m)      | Rotor Diameter (150m)                       | Mitigation required                                     | Mitigation required        | Mitigation required                         | Mitigation required                                                             | Mitigation required        | Mitigation required                         |
| 1        | 561661                    | 673439                     | Derelict    | Yes                     | 640                                  | T2                           | 00:02:23                                                | 00:02:18                   | 00:02:20                                    | 28:59:13                                                                        | 27:16:52                   | 27:31:13                                    | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 2        | 564701                    | 673085                     | Dwelling    | No                      | 720                                  | T3                           | 00:01:35                                                | 00:01:33                   | 00:01:33                                    | 21:59:05                                                                        | 19:17:45                   | 19:40:22                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 3        | 562657                    | 672616                     | Dwelling    | Yes                     | 734                                  | T6                           | 00:02:00                                                | 00:01:52                   | 00:01:55                                    | 28:32:57                                                                        | 26:10:33                   | 26:30:07                                    | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 4        | 562790                    | 672824                     | Dwelling    | Yes                     | 749                                  | T6                           | 00:02:05                                                | 00:01:58                   | 00:01:58                                    | 35:04:40                                                                        | 32:32:30                   | 32:55:43                                    | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 5        | 562676                    | 671693                     | Dwelling    | Yes                     | 750                                  | T7                           | 00:02:25                                                | 00:02:00                   | 00:02:07                                    | 21:08:22                                                                        | 19:13:28                   | 19:26:37                                    | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 6        | 562680                    | 672705                     | Dwelling    | No                      | 759                                  | T6                           | 00:01:58                                                | 00:01:52                   | 00:01:52                                    | 34:21:53                                                                        | 31:08:47                   | 31:32:55                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 7        | 564757                    | 672486                     | Dwelling    | No                      | 775                                  | T5                           | 00:01:50                                                | 00:01:45                   | 00:01:47                                    | 26:58:13                                                                        | 25:12:12                   | 25:29:37                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 8        | 562222                    | 672808                     | Dwelling    | No                      | 782                                  | T2                           | 00:01:15                                                | 00:01:12                   | 00:01:12                                    | 8:07:03                                                                         | 7:28:33                    | 7:35:17                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 9        | 564794                    | 673117                     | Dwelling    | No                      | 802                                  | T3                           | 00:01:52                                                | 00:01:47                   | 00:01:47                                    | 26:46:37                                                                        | 24:34:37                   | 24:53:52                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 10       | 564716                    | 673715                     | Dwelling    | No                      | 812                                  | T3                           | 00:01:45                                                | 00:01:40                   | 00:01:40                                    | 18:36:30                                                                        | 17:03:00                   | 17:15:32                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 11       | 562590                    | 671808                     | Dwelling    | No                      | 815                                  | T7                           | 00:01:50                                                | 00:01:45                   | 00:01:45                                    | 20:03:17                                                                        | 18:34:03                   | 18:50:15                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 12       | 564761                    | 672966                     | Dwelling    | No                      | 820                                  | T3                           | 00:01:35                                                | 00:01:30                   | 00:01:33                                    | 14:22:35                                                                        | 13:15:40                   | 13:27:35                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 13       | 561633                    | 673083                     | Dwelling    | No                      | 823                                  | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 14       | 562647                    | 672798                     | Dwelling    | Yes                     | 840                                  | T6                           | 00:01:47                                                | 00:01:42                   | 00:01:45                                    | 37:03:13                                                                        | 34:17:00                   | 34:42:58                                    | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 15       | 562010                    | 672778                     | Dwelling    | No                      | 855                                  | T2                           | 00:01:05                                                | 00:01:00                   | 00:01:00                                    | 3:19:13                                                                         | 3:03:57                    | 3:05:47                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 16       | 562529                    | 671794                     | Dwelling    | No                      | 878                                  | T7                           | 00:01:42                                                | 00:01:38                   | 00:01:38                                    | 10:50:32                                                                        | 10:03:28                   | 10:12:20                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 17       | 561998                    | 672751                     | Dwelling    | No                      | 885                                  | T2                           | 00:01:05                                                | 00:01:03                   | 00:01:03                                    | 3:17:05                                                                         | 3:03:20                    | 3:05:10                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 18       | 561803                    | 672813                     | Dwelling    | No                      | 912                                  | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 19       | 561838                    | 672785                     | Dwelling    | No                      | 918                                  | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 20       | 562089                    | 672686                     | Dwelling    | No                      | 923                                  | T2                           | 00:01:07                                                | 00:01:05                   | 00:01:05                                    | 6:49:45                                                                         | 6:20:43                    | 6:26:50                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 21       | 561579                    | 672964                     | Dwelling    | No                      | 941                                  | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 22       | 562059                    | 672671                     | Dwelling    | No                      | 944                                  | T2                           | 00:01:07                                                | 00:01:03                   | 00:01:05                                    | 3:39:05                                                                         | 3:20:45                    | 3:23:30                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 23       | 561980                    | 672693                     | Dwelling    | No                      | 945                                  | T2                           | 00:01:05                                                | 00:01:00                   | 00:01:00                                    | 3:14:38                                                                         | 3:01:30                    | 3:03:02                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 24       | 561947                    | 672696                     | Dwelling    | No                      | 953                                  | T2                           | 00:01:03                                                | 00:01:00                   | 00:01:00                                    | 3:06:42                                                                         | 2:52:57                    | 2:56:00                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 25       | 561853                    | 672723                     | Dwelling    | No                      | 966                                  | T2                           | 00:00:58                                                | 00:00:55                   | 00:00:55                                    | 2:45:00                                                                         | 2:32:10                    | 2:34:00                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 26       | 561968                    | 672666                     | Dwelling    | Yes                     | 974                                  | T2                           | 00:01:03                                                | 00:01:03                   | 00:01:03                                    | 3:14:38                                                                         | 2:59:40                    | 3:03:20                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 27       | 561942                    | 672666                     | Dwelling    | No                      | 983                                  | T2                           | 00:01:03                                                | 00:01:00                   | 00:01:00                                    | 3:07:37                                                                         | 2:52:20                    | 2:54:10                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 28       | 562416                    | 671818                     | Dwelling    | No                      | 989                                  | T7                           | 00:01:30                                                | 00:01:27                   | 00:01:27                                    | 9:43:18                                                                         | 8:08:17                    | 8:24:28                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 29       | 562038                    | 672619                     | Dwelling    | No                      | 1000                                 | T2                           | 00:01:07                                                | 00:01:05                   | 00:01:05                                    | 3:36:20                                                                         | 3:21:58                    | 3:23:30                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 30       | 562002                    | 672616                     | Dwelling    | No                      | 1012                                 | T2                           | 00:01:05                                                | 00:01:03                   | 00:01:03                                    | 3:26:33                                                                         | 3:10:22                    | 3:11:35                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 31       | 561489                    | 672953                     | Dwelling    | No                      | 1017                                 | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 32       | 562066                    | 672595                     | Dwelling    | No                      | 1017                                 | T2                           | 00:01:10                                                | 00:01:07                   | 00:01:07                                    | 6:47:37                                                                         | 6:19:48                    | 6:25:00                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 33       | 562004                    | 672602                     | Dwelling    | No                      | 1025                                 | T2                           | 00:01:07                                                | 00:01:03                   | 00:01:03                                    | 3:27:28                                                                         | 3:12:30                    | 3:15:33                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 34       | 562272                    | 672216                     | Dwelling    | No                      | 1046                                 | T6                           | 00:01:25                                                | 00:01:23                   | 00:01:23                                    | 11:18:38                                                                        | 10:27:00                   | 10:34:57                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 35       | 562075                    | 672553                     | Dwelling    | No                      | 1056                                 | T2                           | 00:01:10                                                | 00:01:07                   | 00:01:07                                    | 6:58:37                                                                         | 6:26:32                    | 6:32:20                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 36       | 561435                    | 672956                     | Dwelling    | No                      | 1058                                 | T2                           | 00:00:00                                                | 00:00:00                   | 00:00:00                                    | 0:00:00                                                                         | 0:00:00                    | 0:00:00                                     | No                                                      | No                         | No                                          | No                                                                              | No                         | No                                          |
| 37       | 561954                    | 672579                     | Dwelling    | No                      | 1062                                 | T2                           | 00:01:05                                                | 00:01:00                   | 00:01:00                                    | 3:15:33                                                                         | 3:01:30                    | 3:04:15                                     | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 38       | 562291                    | 672007                     | Dwelling    | No                      | 1063                                 | T6                           | 00:01:27                                                | 00:01:25                   | 00:01:25                                    | 17:17:03                                                                        | 15:52:43                   | 16:12:35                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |
| 39       | 562385                    | 671518                     | Dwelling    | No                      | 1081                                 | T7                           | 00:01:27                                                | 00:01:25                   | 00:01:25                                    | 12:51:50                                                                        | 12:02:20                   | 12:08:45                                    | Yes                                                     | Yes                        | Yes                                         | Yes                                                                             | Yes                        | Yes                                         |

|    |        |        |                      |    |      |    |          |          |          |          |          |          |     |     |     |     |     |     |
|----|--------|--------|----------------------|----|------|----|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|
| 40 | 561933 | 672538 | Dwelling             | No | 1107 | T2 | 00:01:03 | 00:01:03 | 00:01:03 | 3:11:53  | 2:58:27  | 2:59:22  | Yes | Yes | Yes | Yes | Yes | Yes |
| 41 | 561389 | 672923 | Planning Application | No | 1114 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 42 | 562360 | 671406 | Dwelling             | No | 1146 | T7 | 00:01:23 | 00:01:18 | 00:01:18 | 7:59:07  | 7:11:45  | 7:17:15  | Yes | Yes | Yes | Yes | Yes | Yes |
| 43 | 561896 | 672506 | Dwelling             | No | 1149 | T2 | 00:01:03 | 00:01:00 | 00:01:00 | 3:04:33  | 2:52:20  | 2:54:47  | Yes | Yes | Yes | Yes | Yes | Yes |
| 44 | 565161 | 673542 | Dwelling             | No | 1171 | T3 | 00:01:15 | 00:01:10 | 00:01:12 | 7:38:20  | 7:01:40  | 7:09:00  | Yes | Yes | Yes | Yes | Yes | Yes |
| 45 | 561867 | 672492 | Dwelling             | No | 1172 | T2 | 00:01:00 | 00:00:58 | 00:01:00 | 2:59:03  | 2:45:55  | 2:48:58  | Yes | Yes | Yes | Yes | Yes | Yes |
| 46 | 561052 | 673780 | Dwelling             | No | 1174 | T1 | 00:01:18 | 00:01:15 | 00:01:15 | 10:03:10 | 9:19:10  | 9:27:43  | Yes | Yes | Yes | Yes | Yes | Yes |
| 47 | 565115 | 673731 | Dwelling             | No | 1180 | T3 | 00:01:15 | 00:01:10 | 00:01:10 | 4:20:38  | 4:00:10  | 4:02:37  | Yes | Yes | Yes | Yes | Yes | Yes |
| 48 | 562221 | 671777 | Dwelling             | No | 1186 | T7 | 00:01:18 | 00:01:15 | 00:01:15 | 12:58:15 | 11:49:48 | 11:59:53 | Yes | Yes | Yes | Yes | Yes | Yes |
| 49 | 562345 | 671342 | Dwelling             | No | 1187 | T7 | 00:01:05 | 00:01:00 | 00:01:03 | 4:32:52  | 3:49:28  | 3:53:45  | Yes | Yes | Yes | Yes | Yes | Yes |
| 50 | 561842 | 672467 | Dwelling             | No | 1205 | T2 | 00:01:00 | 00:00:58 | 00:00:58 | 2:55:42  | 2:41:38  | 2:43:47  | Yes | Yes | Yes | Yes | Yes | Yes |
| 51 | 561010 | 673785 | Dwelling             | No | 1214 | T1 | 00:01:15 | 00:01:12 | 00:01:12 | 9:20:05  | 8:35:28  | 8:43:43  | Yes | Yes | Yes | Yes | Yes | Yes |
| 52 | 561806 | 672456 | Dwelling             | No | 1228 | T2 | 00:01:00 | 00:00:55 | 00:00:58 | 2:48:22  | 2:34:00  | 2:37:03  | Yes | Yes | Yes | Yes | Yes | Yes |
| 53 | 561626 | 672516 | Dwelling             | No | 1258 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 54 | 561644 | 672378 | Dwelling             | No | 1368 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 55 | 562400 | 670949 | Dwelling             | No | 1370 | T7 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 56 | 565364 | 672522 | Dwelling             | No | 1382 | T5 | 00:01:05 | 00:01:03 | 00:01:03 | 6:43:57  | 6:11:15  | 6:14:37  | Yes | Yes | Yes | Yes | Yes | Yes |
| 57 | 561531 | 672385 | Dwelling             | No | 1419 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 58 | 560905 | 673232 | Dwelling             | No | 1423 | T2 | 00:01:05 | 00:01:03 | 00:01:03 | 6:07:35  | 5:13:48  | 5:22:22  | Yes | Yes | Yes | Yes | Yes | Yes |
| 59 | 561587 | 672347 | Dwelling             | No | 1423 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 60 | 561441 | 672436 | Dwelling             | No | 1427 | T2 | 00:00:00 | 00:00:00 | 00:00:00 | 0:00:00  | 0:00:00  | 0:00:00  | No  | No  | No  | No  | No  | No  |
| 61 | 565472 | 673141 | Dwelling             | No | 1467 | T3 | 00:01:00 | 00:01:00 | 00:01:00 | 3:26:52  | 3:14:38  | 3:17:23  | Yes | Yes | Yes | Yes | Yes | Yes |
| 62 | 565485 | 672351 | Dwelling             | No | 1495 | T5 | 00:00:58 | 00:00:58 | 00:00:58 | 3:02:07  | 2:47:08  | 2:50:12  | Yes | Yes | Yes | Yes | Yes | Yes |
| 63 | 565515 | 672347 | Dwelling             | No | 1526 | T5 | 00:00:58 | 00:00:55 | 00:00:58 | 2:56:37  | 2:43:28  | 2:46:13  | Yes | Yes | Yes | Yes | Yes | Yes |
| 64 | 560877 | 672991 | Dwelling             | No | 1528 | T2 | 00:01:03 | 00:01:00 | 00:01:00 | 7:05:02  | 6:31:25  | 6:39:22  | Yes | Yes | Yes | Yes | Yes | Yes |