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## EXECUTIVE SUMMARY

TNEI Services Ltd was commissioned by SSE Renewables Developments UK Ltd (SSE) to undertake an assessment of the potential for shadow flicker occurrence resulting from the installation of fifteen wind turbines at the consented Tievenameenta Wind Farm. The shadow flicker assessment was used to assess the potential for shadow flicker occurrence resulting from the development at the nearest assessment locations.

Under certain combinations of geographical position, time of day and year, wind speed and wind direction, the sun may pass behind the rotor of a wind turbine and cast a shadow over neighbouring buildings' windows. When the blades rotate and the shadow passes a window, to a person within that room the shadow appears to flick on and off; this effect is known as shadow flicker. Shadows cast by the turbine upon the ground are referred to as shadow throw.

Fifteen 93m rotor diameter wind turbines were modelled in this assessment, which provided a worst case scenario in terms of the potential area susceptible to shadow flicker. Fourteen assessment locations were located within 930m (10 times the rotor diameter, the theoretical area as stated in Planning Policy Statement 18 (2009) to which shadow flicker is expected to have an effect on receptors around wind farms) of the approved wind turbines, and as such there is the potential for shadow flicker to occur. Four additional assessment locations were included in the assessment due to their proximity to the 10 rotor diameter study area and a further nine due to their planning status, for a total of 27 assessment locations.

The maximum worst-case shadow flicker occurrence at the most affected window of the most affected financially involved property at H10 (22 Pullytean Road), is predicted to be 190.3 hours per year. This is reduced to 57 hours based on actual sunshine hours and likely operating times of the turbines. This exceeds the 30 hours per year threshold stated in PPS18. The times of day when shadow flicker could theoretically occur at this location are in the early morning and afternoon time from January to May, and July to December.

For the most affected non-financially involved property, the maximum theoretical occurrence of shadow flicker amounts to 79.7 hours per year at the most affected window of H3 (31 Shanaghy Road), located to the east of the development. This is reduced to 23.9 hours based on actual sunshine hours and likely operating times of the turbines. This is below the 30 hours per year threshold stated in PPS18. The times of day when shadow flicker could theoretically occur at this window are in the late afternoon to early evening time from February to August and October.

These are the theoretical maximum number of shadow flicker hour figures per year and do not take into account weather conditions (i.e. when there is no sun or partial cloud cover), local visual obstructions (such as trees, hedges or other structures), turbine orientation and turbine operation. In reality, the amount of time at which shadow flicker occurs would be less than that predicted.

If shadow flicker is found to cause a nuisance, mitigation measures can be implemented in order to reduce or eliminate the occurrence. Such measures could be secured via installation of a Shadow Flicker control system for the considered candidate wind turbines.

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## 1 INTRODUCTION

### 1.1 Brief

- 1.1.1 To undertake a shadow flicker assessment for the consented Tievenameenta Wind Farm (hereafter referred to as the development) in order to quantify the potential shadow flicker occurrence during turbine operation that will be incident in neighbouring receptors.
- 1.1.2 To present the results of the assessment in a report with reference to current Planning Policy Statement 18<sup>1</sup> and Best Practice Guidance<sup>2</sup> (2009).
- 1.1.3 To undertake a site visit to the site in order that window locations, dimensions and land features are better estimated for the purposes of the assessment.

### 1.2 Background

- 1.2.1 TNEI Services Ltd was commissioned by SSE Renewables Developments (UK) Ltd to undertake a shadow flicker assessment for the development. The development is located approximately 14 kilometres southwest of Castledegr. The approximate Irish grid reference for the site centre is 216063, 376630. The development has been approved (Application No: J/2012/0391/F) for the installation of fifteen wind turbines and associated ancillary infrastructure.

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<sup>1</sup>[http://www.planningni.gov.uk/index/policy/planning\\_statements\\_and\\_supplementary\\_planning\\_guidance/planning\\_policy\\_statement\\_18\\_renewable\\_energy.pdf](http://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18_renewable_energy.pdf) (Last accessed 06/01/2016)

<sup>2</sup>[http://www.planningni.gov.uk/index/policy/planning\\_statements\\_and\\_supplementary\\_planning\\_guidance/planning\\_policy\\_statement\\_18\\_renewable\\_energy\\_best\\_practice\\_guidance.pdf](http://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18_renewable_energy_best_practice_guidance.pdf) (Last accessed 06/01/2016)

## 2 SHADOW FLICKER PLANNING POLICY AND GUIDANCE

### 2.1 Planning Policy Statement 18: Renewable Energy and Best Practice Guidance (August 2009)

2.1.1 The DOE has a series of Planning Policy Statements which set out policies of the Department on particular aspects of land-use planning and are applicable to the whole of Northern Ireland.

2.1.2 The accompanying best practice guidance contains more detailed discussion and guidance in relation to Shadow Flicker. Paragraphs 1.3.72 to 1.3.78 relate to Shadow Flicker and Reflected light. Paragraphs 1.3.72 to 1.3.76 provide a definition of shadow flicker and identify the conditions where it may occur.

Paragraph 1.3.77 states that:

*'Careful site selection, design and planning, and good use of relevant software, can help to avoid the possibility of shadow flicker in the first instance. It is recommended that shadow flicker at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day.'* (Recommendations are based on research by Predac, a EU sponsored organisation promoting best practice in energy use and supply).

### 2.2 IWEA Best Practice Guidelines for the Irish Wind Energy Industry<sup>3</sup>

2.2.1 In March 2012, the Irish Wind Energy Association issued a document detailing best practice guidance for wind farms.

2.2.2 The document provides a preferred methodology to predict the worst case shadow flicker conditions in order to provide the most robust results from the assessment. In regards to shadow flicker, the IWEA guidelines support those given in the Wind Energy Development Guidelines, stating:

*'The assessment of potentially sensitive locations or receptors within a distance of ten rotor diameters from proposed turbine locations will normally be suitable for EIA purposes'*

and;

*'Where shadow flicker is anticipated to lead to potential problems, measures can be implemented to mitigate these effects. Wind turbine control software is available, which can turn the relevant turbine off at these times...Other mitigation measures could include the provision of screening measures, where this is acceptable to the relevant householder.'*

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<sup>3</sup><http://www.iwea.com/contentFiles/Documents%20for%20Download/Publications/News%20Items/IWEA%20Best%20Practice%20Guidelines%20March%202012.pdf> (Last accessed 05/01/2015)

## 2.3 Department of Energy and Climate Change (DECC) - Update of UK Shadow Flicker Evidence Base

- 2.3.1 In March 2011, the Department of Energy and Climate Change issued a report titled 'Update of UK Shadow Flicker Evidence Base.' The report was prepared for DECC by Parsons Brinckerhoff (PB). The report summarised the findings of research undertaken by PB with a view to enabling DECC to 'advance current understanding of the shadow flicker effect.' The report:

*'Presents an update of the evidence base which has been produced by carrying out a thorough review of international guidance on shadow flicker, an academic literature review and by investigating current assessment methodologies employed by developers and case study evidence.'*

- 2.3.2 The PB report concludes that an assessment area of 10 rotor diameters, 130 degrees either side of north is appropriate whilst noting that an adjustment may be appropriate for sites with different latitudes. PB found that a worst-case scenario is usually reported but noted that this is sometimes accompanied by a more 'realistic' approximation. The report confirms that the industry software packages WindPro, WindFarm and WindFarmer provide similar outputs.
- 2.3.3 Potential health effects and nuisance are also considered and the PB report states: 'it is considered that the frequency of the flickering caused by the wind turbine rotation is such that it should not cause a significant risk to health. Mitigation measures which have been employed to operational wind farms such as turbine shut down strategies, have proved very successful, to the extent that shadow flicker can not be considered to be a major issue in the UK.'

### 3 METHODOLOGY

#### 3.1 Conditions required for Shadow Flicker

3.1.1 It is possible to calculate the number of hours per year that shadow flicker may occur at a window from the relative position of the turbines to the assessment location, the geometry of the wind turbines, the latitude of the wind farm site and the width of the windows potentially affected.

3.1.2 The likelihood of shadow flicker occurring and the duration of such an effect depends upon the following factors:

- the direction of the assessment location relative to the turbine(s);
- the distance from the turbine(s);
- the turbine hub-height(s) and rotor diameter(s);
- the time of year (the height of the sun in the sky);
- the proportion of day-light hours in which the turbine(s) operate(s);
- the frequency of bright sunshine and cloudless skies (particularly at low elevations above the horizon); and
- the prevailing wind direction (which impacts on turbine orientation).

3.1.3 Shadow flicker can result in a degradation of amenity when people are within the rooms affected by the phenomenon. In order to quantify this effect, it is possible to calculate the number of hours per year that shadow flicker can occur at a window.

#### 3.2 Identification of the Study Area for the Assessment

3.2.1 The specialist computer software 'WindFarm' (1997-2014)<sup>4</sup> has been used to identify the potential area susceptible to shadow flicker. The software identifies the study area for the assessment based on candidate turbine dimensions and orientations.

3.2.2 The candidate wind turbine modelled in this assessment has a rotor diameter of 93m; therefore, the study area has been limited to 930m and 130 degrees either side of north around the approved turbine locations, as shown on Figure A1.1 (Annex 1).

#### 3.3 Identification of Potential Receptors

3.3.1 Following the identification of the study area, a desktop assessment was undertaken in order to identify all assessment locations which could be potentially susceptible to shadow flicker.

3.3.2 Receptors located outside 130 degrees either side of north have been excluded from the analysis as there is no direct path between the sun, the turbine and these receptors, thus in accordance with current guidance shadow flicker would not, in theory, occur.

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<sup>4</sup> ReSoft Ltd (1997-2014) WindFarm Release 4.2.1.9

## 4 BASELINE

### 4.1 Site Survey

4.1.1 The immediate area surrounding the site is largely farming land with scattered dwellings. A desk based survey was carried out which found a number of assessment locations within the study area that would be theoretically susceptible to shadow flicker.

4.1.2 A site survey was undertaken in December 2015. Following the site survey, 27 properties were chosen for the detailed assessment. Details of the surveyed receptors are provided in Table 4.1 below and a brief description is given in the following paragraphs.

4.1.3 The status of two buildings identified during the desktop study was confirmed during the site survey. These buildings are located south of H18 (approximate grid co-ordinates 216041, 378085) and are confirmed as being two abandoned sheds. As such, they do not require assessing as dwellings, in accordance with PPS18.

4.1.4 Additional properties were found to be in planning around the wind farm. Where no information was available detailing the layout and orientation of the windows, a standard layout of one ground and one first floor window was used, with both orientated to face directly towards the nearest wind turbine to the planned properties' south, in order to predict the most amount of potential shadow flicker (if any) that could occur.

**Table 4.1: Assessment Locations**

Assessment Location (H#)	Address	Easting (m)	Northing (m)	Approximate Distance to nearest Turbine (m)
1*	Property on Shanaghy Road (South)	216189	375517	419
2	35 Shanaghy Road	216660	376450	616
3	Shanaghy Road	216834	377194	503
4*	27 Shanaghy Road	216781	377805	562
5	17 Shanaghy Road	216871	378080	818
6*	19/21 Shanaghy Road	216583	378115	595
7	Shanaghy Road	217119	377988	926
8	7 Pullytean Road	215948	378790	1091
9*	17 Pullytean Road	215796	378120	521
10*	22 Pullytean Road	215548	377173	369
11*	40 Pullytean Road	215410	377174	375
12	32 Shanaghy Road	216965	376456	875
13	34 Shanaghy Road	217070	376580	934
14	Pullytean Road	216036	378570	867
15	Ballymongan Road	215160	378218	924

16	Pullytean Road	216028	378669	970
17	5 Pullytean Road	216009	378609	906
18	Pullytean Road	216094	378289	586
19	50m SW of no 15 Pullytean Road	215785	378202	603
20	80m NW of 10 Pullytean Road	216115	378498	793
21	50m SW of No 10 Pullytean Road	216118	378397	692
22	160M NE of 17 Pullytean Road	216152	378448	743
23	60m NE of No 27 Shanaghy Road	217141	378041	987
24	140m NE of 9A Pullytean Road	216231	378582	881
25	26 Ballymongan Road	216268	379184	1484
26	300m NE of Ballymongan Road	216311	379220	1515
27	90m NE of 48 Ballymongan Road	215673	378866	1252

\*Denotes assessment location that is Financially Involved with the Development.

- 4.1.5 The grid co-ordinates are taken from the base windows used in WindFarm for each assessment location.
- 4.1.6 The above distance to the turbine refers to the distance as measured from the turbine to the closest point on the façade of the assessment location.
- 4.1.7 A map of the assessment locations can be found in figure A1.1 in Annex 1.

#### **H1 - Property on Shanaghy Road (South)**

- 4.1.8 This receptor is located to the south east of the development. The windows facing west will have a direct view towards the turbines. This property was unoccupied and in a state of disrepair when the site survey was undertaken. This receptor is financially involved with the development.

#### **H2, 12 & 13 - Properties along Shanaghy Road**

- 4.1.9 These receptors are located to the east of the development and are all currently occupied. There are windows facing west, north west and south west. The view towards the development from H4 may be obscured by adjacent farm buildings and hill behind the property.

#### **H3 - 31 Shanaghy Road**

- 4.1.10 This receptor is located to the east of the development. There are windows facing north, south east and west, with the view south slightly obscured by farm buildings and the view east slightly obscured by a hill.

#### **H4, 5, 6 & 7 - Properties on Shanaghy Road (North)**

4.1.11 These receptors are located to the north east of the development. There are windows facing south and west which are likely to have a direct view towards the turbines. The view south at H4 and H7 may be obscured by adjacent farm buildings. H4 and H6 are financially involved with the development.

#### **H8, 14, 16 & 17 - Properties on Pullytean Road (North)**

4.1.12 These receptors are located to the north of the development. There are windows facing north, south, east and west. The view south from H14 is obscured by an adjacent farm building.

#### **H9 & 19 - Properties on Pullytean Road (West)**

4.1.13 These receptor are located to the north of the development. There are windows facing south west, west and north east which are likely to have a direct view towards the turbines. This property is financially involved with the development, but was found to be abandoned during the site survey. H19 has been approved for planning permission, however, the building has not been constructed and there is currently no data as to the layout and orientation of the windows in relation to the wind farm. As such, the dimensions and orientation of the windows have been assumed.

#### **H10 & 11 - Properties on Pullytean Road (South)**

4.1.14 These receptors are located to the west of the development. There are windows facing north east and south west. The windows facing south west are likely to have a direct view towards the turbines, although the view from both properties to the south east towards turbines 5 and 6 may be partially obscured by a mix of adjacent farm buildings and foliage. During the site survey, H11 was found to be unoccupied. However, a caravan within the property was found to be lived in, and thus included in this assessment. Both properties are financially involved with the development.

#### **H15 - Property South of Ballymongen Road**

4.1.15 This receptor is located to the north west of the development. There are windows facing east and south which are likely to have a direct view towards the turbines.

#### **H18 - Property South of Ballymongen Road**

4.1.16 This receptor is located to the north of the development. There are windows facing south which are likely to have direct views towards the turbines.

#### **H20, 21, 22 & 24 - Planned Properties on Pullytean Road (North)**

4.1.17 These properties (with the exception of H24, which is currently awaiting decision) have been approved for planning permission, however, the properties have not yet been constructed and there is currently no data as to the layout and orientation of the windows in relation to the wind farm. As such, the dimensions and orientation of the windows have been assumed.

#### **H23 - Property North of Shanaghy Bridge**

4.1.18 This property has been approved for planning permission, however, the building has not been constructed and there is currently no data as to the layout and orientation of the windows in relation to the wind farm. As such, the dimensions and orientation of the windows have been assumed.

#### H25 & 26 - Properties North East of Ballymongan Road

4.1.19 These properties are currently in planning and have not yet been constructed, thus, there is currently no data as to the layout and orientation of the windows in relation to the wind farm. As such, the dimensions and orientation of the windows have been assumed.

#### H27 - Property North East of 48 Ballymongan Road

4.1.20 This properties are currently in planning and have not yet been constructed, thus, there is currently no data as to the layout and orientation of the windows in relation to the wind farm. As such, the dimensions and orientation of the windows have been assumed.

## 4.2 Survey Results

4.2.1 The orientations of the facades of the assessment locations which face the wind turbines were identified. The dimensions and elevations of the facades were estimated using photography obtained through the visit to the site, as well as aerial imagery.

4.2.2 Details of the building survey results are summarised in Table 4.2 below.

Table 4.2: Building Survey Results

Receptor/ Window	Easting	Northing	Windows					
			Width (m)	Height (m)	Elevation (m.agl)	Aspect (° from north)	Tilt Angle	No. of Windows Represented
01/01	216189	375517	1.2	2	1.5	101	0	1
01/02	216189	375520	1	0.8	1.8	101	0	1
01/03	216189	375524	1.2	2	1.5	101	0	1
01/04	216189	375517	1	1.5	4	101	0	1
01/05	216189	375520	1	1.5	4	101	0	1
01/06	216189	375524	1.2	1	4	101	0	1
01/07	216182	375520	1	1	1.5	281	0	1
01/08	216182	375524	1	1	1.5	281	0	1
01/09	216182	375521	1	1	3.5	281	0	1
02/01	216660	376450	1	1.2	1.8	298	0	1
02/02	216660	376447	2	1.5	1.5	298	0	1
02/03	216660	376443	1	1.2	1.2	298	0	1
02/04	216660	376439	2	1.5	1.5	298	0	1
02/05	216660	376447	2	1.5	4.5	298	0	1
02/06	216660	376445	1	1.2	4.5	298	0	1
02/07	216660	376443	1.5	1.5	4.2	298	0	1
02/08	216660	376439	2	1.5	4.5	298	0	1
02/09	216662	376433	1.5	1.5	1.5	208	0	1
02/10	216667	376433	1.5	1.5	1.5	208	0	1
02/11	216662	376433	1	1.5	4.5	208	0	1
02/12	216667	376433	1	1.5	4.5	208	0	1
02/13	216668	376435	2.5	1.5	1.5	118	0	1
02/14	216668	376442	1.2	2	1.2	118	0	1
02/15	216668	376447	2.5	1.5	1.5	118	0	1

02/16	216668	376435	2	1.5	4.5	118	0	1
02/17	216668	376442	1	1.5	4.5	118	0	1
02/18	216668	376447	1.5	1.5	4.5	118	0	1
02/19	216664	376450	1.2	2	1.2	118	0	1
03/01	216834	377194	1	1.5	1.3	276	0	1
03/02	216834	377192	1	1	1.6	276	0	1
03/03	216834	377190	0.5	1	1.6	276	0	1
03/04	216834	377189	1	1.5	1.6	276	0	1
03/05	216834	377187	1	1.8	1.6	276	0	1
03/06	216836	377185	1.5	1	1.5	186	0	1
04/01	216781	377805	1.5	2	1.1	270	0	1
04/02	216781	377803	1	1.5	1.6	270	0	1
04/03	216783	377796	1	1.5	1.6	180	0	1
04/04	216784	377796	1	1.5	1.8	180	0	1
04/05	216783	377808	2	1.5	1.8	0	0	1
05/01	216871	378080	2	2.5	1.3	238	0	1
05/02	216874	378078	4.5	2.5	1.3	148	0	1
05/03	216874	378080	4.5	4.5	3	148	45	1
05/04	216876	378080	2	2.5	1.3	58	0	1
05/05	216871	378085	2	1	1.8	238	0	1
05/06	216871	378088	0.5	0.8	1.5	238	0	1
05/07	216871	378090	1.5	1	1.8	238	0	1
05/08	216871	378084	1	1	4	238	0	1
05/09	216871	378086	1	1	4	238	0	1
05/10	216871	378090	1	1	4	238	0	1
05/11	216871	378080	1	1	2	0	0	1
05/12	216871	378080	1	1	2	0	0	1
05/13	216871	378080	1	1	2	0	0	1
05/14	216871	378080	1	1	2	0	0	1
05/15	216871	378080	1	1	2	0	0	1
05/16	216871	378080	1	1	2	0	0	1
06/01	216583	378115	2	1.3	1.5	270	0	1
06/02	216583	378115	2	1.3	4	270	0	1
06/03	216583	378113	1	1	1.8	270	0	1
06/04	216583	378112	2	1.3	4	270	0	1
06/05	216583	378110	1	1	1.8	270	0	1
06/06	216583	378109	1	1	1.5	270	0	1
06/07	216583	378108	2	1.5	4	270	0	1
06/08	216583	378106	2	1.5	1.8	270	0	1
06/09	216584	378103	1	1.5	1.5	180	0	1
06/10	216584	378103	1	1.5	4	180	0	1
06/11	216584	378101	2	2	1.1	270	0	1
06/12	216584	378102	1	1	3.5	270	45	1
06/13	216584	378100	1	1	3.5	270	45	1
06/14	216585	378095	1	1.5	1.5	180	0	1
06/15	216587	378095	1	1.5	1.5	180	45	1
07/01	217119	377988	1	1.7	1.5	297	0	1
07/02	217118	377986	1	1.7	1.5	297	0	1
07/03	217118	377985	1	1.7	1.5	297	0	1
07/04	217117	377981	2	2	2	297	0	1
07/05	217118	377979	1	1.7	1.5	297	0	1
07/06	217118	377977	1	1.7	1.5	297	0	1
07/07	217121	377975	1	1.7	1.5	207	0	1
07/08	217121	377973	3	1.7	1.5	297	0	1
07/09	217116	377971	2	1.7	1.5	207	0	1
07/10	217129	377980	1	1	1.5	207	0	1
07/11	217133	377980	1	1	1.5	207	0	1
08/01	215948	378790	2.2	1.5	1.5	165	0	1
08/02	215945	378789	1	1.2	1.5	165	0	1
08/03	215942	378790	2.2	1.5	1.5	165	0	1
08/04	215939	378790	2.2	1.5	1.5	165	0	1

08/05	215933	378790	1	1	1.5	165	0	1
08/06	215934	378781	1.5	1.2	1.5	345	0	1
08/07	215936	378781	1	1.2	1.5	345	0	1
08/08	215939	378781	1.5	1.5	1.5	345	0	1
08/09	215941	378781	1	1.2	1.5	345	0	1
08/10	215943	378781	1.2	2	1.1	345	0	1
08/11	215945	378781	15	1.5	1.5	345	0	1
08/12	215949	378783	1.2	1	1.5	255	0	1
09/01	215796	378120	2	1.7	1.5	32	0	1
09/02	215794	378121	1.2	2	1.2	32	0	1
09/03	215794	378122	2	1.8	1.5	122	0	1
09/04	215790	378118	1	1	1.7	212	0	1
09/05	215786	378117	1	1	1.5	212	0	1
09/06	215781	378116	1	1.2	1.5	212	0	1
10/01	215548	377173	1.7	1.5	1.6	58	0	1
10/02	215546	377175	1.7	1.5	1.6	58	0	1
10/03	215544	377177	1.7	1.5	1.6	58	0	1
10/04	215539	377182	2	2	1.5	58	0	1
10/05	215535	377186	1.7	1.5	1.6	58	0	1
10/06	215538	377183	1.7	1.5	1.6	238	0	1
10/07	215539	377179	1.7	1.5	1.6	238	0	1
10/08	215540	377177	1.7	1.5	1.6	238	0	1
10/09	215540	377175	1	1	1.6	328	0	1
10/10	215540	377173	2	1.5	1.6	148	0	1
10/11	215543	377171	1	1	1.6	148	0	1
11/01	215410	377174	1	1	1.5	54	0	1
11/02	215412	377173	1	1.5	1.5	54	0	1
11/03	215419	377171	1	1	1.5	54	0	1
11/04	215423	377170	1	1.5	1.5	54	0	1
11/05	215428	377168	1	1.5	1.5	54	0	1
11/06	215418	377177	2	1	1.5	144	0	1
11/07	215417	377179	2	1.6	1.5	54	0	1
11/08	215410	377174	1	1	1.5	54	0	1
12/01	216965	376456	1	1	2	311	0	1
12/02	216965	376456	1	1	2	311	0	1
12/03	216965	376456	1	1	2	311	0	1
12/04	216965	376456	1	1	2	311	0	1
12/05	216965	376456	1	1	2	311	0	1
12/06	216965	376456	1	1	2	311	0	1
12/07	216965	376456	1	1	2	311	0	1
12/08	216965	376456	1	1	2	221	0	1
12/09	216965	376456	1	1	2	221	0	1
12/10	216965	376456	1	1	2	221	0	1
12/11	216965	376456	1	1	2	41	0	1
12/12	216965	376456	1	1	2	41	0	1
12/13	216965	376456	1	1	2	41	0	1
13/01	217070	376580	2	1.5	1.5	318	0	1
13/02	217070	376580	2	1.5	4	318	0	1
13/03	217069	376577	0.5	1	1.5	318	0	1
13/04	217069	376577	1.5	1.5	4	318	0	1
13/05	217068	376575	2	1.5	1.5	318	0	1
13/06	217068	376575	2	1.5	4	318	0	1
13/07	217065	376570	1	1.5	4	318	0	1
14/01	216036	378570	2.5	1.5	1.5	72	0	1
14/02	216036	378570	2.5	1.5	4.5	72	0	1
14/03	216032	378568	1	1	4.5	162	0	1
14/04	216038	378574	2.2	1.5	1.5	72	0	1
14/05	216034	378576	1.5	2	1.1	72	0	1
14/06	216034	378579	2.2	1.5	1.5	72	0	1
14/07	216028	378582	1.5	2	1.1	72	0	1
14/08	216026	378580	1	1	3	252	0	1

14/09	216028	378577	2	1	3	252	0	1
14/10	216028	378574	1	1	3	252	0	1
14/11	216028	378572	1.5	1	3	252	0	1
14/12	216028	378571	1	1	3	252	0	1
14/13	216028	378569	1	1	3	252	0	1
14/14	216028	378571	1.5	1	5	252	0	1
14/15	216028	378569	1.5	1	5	252	0	1
15/01	215160	378218	1	1.5	1.5	277	0	1
15/02	215160	378211	1	1.5	1.5	277	0	1
15/03	215160	378209	2	1.5	1.5	277	0	1
15/04	215160	378205	1	1.5	1.5	277	0	1
15/05	215160	378218	1	1.5	4.5	277	0	1
15/06	215160	378212	1	1.5	4.5	277	0	1
15/07	215160	378209	1	1.5	4.5	277	0	1
15/08	215160	378205	1	1.5	4.5	277	0	1
15/09	215168	378206	1	1.5	1.5	92	0	1
15/10	215169	378208	1	1.5	1.5	182	0	1
15/11	215174	378210	2	1.5	1.5	92	0	1
15/12	215172	378212	2	1.5	1.5	2	0	1
15/13	215169	378212	0.5	0.5	1.8	2	0	1
15/14	215167	378213	2	1	1.5	92	0	1
16/01	216028	378669	1	1	1.5	166	0	1
16/02	216032	378669	1	1.5	1.5	166	0	1
16/03	216036	378669	1	1.5	1.5	166	0	1
16/04	216026	378671	1.5	1.5	1.5	256	0	1
16/05	216026	378675	1.5	1.5	1.5	256	0	1
16/06	216028	378678	1.2	1.2	1.5	346	0	1
16/07	216031	378677	1.2	1.2	1.5	346	0	1
16/08	216035	378677	1.2	1.2	1.5	346	0	1
17/01	216009	378609	2	1.2	1.5	340	0	1
17/02	216005	378608	1	1	1.5	340	0	1
17/03	216003	378610	2	1.6	1.4	340	0	1
17/04	215998	378609	2	1.2	1.5	340	0	1
17/05	216011	378605	1	1	1.5	70	0	1
17/06	216009	378600	1.8	1.5	1.5	160	0	1
17/07	216003	378600	2	1.5	1.5	160	0	1
17/08	215998	378598	1.8	1.5	1.5	160	0	1
18/01	216094	378289	1	1.2	1.5	162	0	1
18/02	216091	378289	1.2	1.2	1.5	162	0	1
18/03	216088	378289	1	1	1.5	162	0	1
18/04	216085	378289	1.2	1.2	1.5	162	0	1
18/05	216082	378289	1	1.2	1.5	162	0	1
18/06	216094	378290	1.2	1	1.5	72	0	1
18/07	216079	378292	1	1	1.5	252	0	1
18/08	216079	378298	1.2	1.2	1.5	342	0	1
18/09	216080	378298	1.2	1.2	1.5	342	0	1
18/10	216082	378298	2	1.2	1.5	342	0	1
18/11	216088	378298	1.6	1.5	1.5	342	0	1
18/12	216091	378298	1.2	1.2	1.5	342	0	1
18/13	216094	378298	1.2	1.2	1.5	342	0	1
19/01	215785	378202	2	1	1.5	173	0	1
19/02	215785	378202	2	1	4.5	173	0	1
20/01	216115	378498	2	1	1.5	178	0	1
20/02	216115	378498	2	1	4.5	178	0	1
21/01	216118	378397	2	1	1.5	178	0	1
21/02	216118	378397	2	1	4.5	178	0	1
22/01	216152	378448	2	1	1.5	181	0	1
22/02	216152	378448	2	1	4.5	181	0	1
23/01	217141	378041	2	1	1.5	230	0	1
23/02	217141	378041	2	1	4.5	230	0	1
24/01	216231	378582	2	1	1.5	186	0	1

24/02	216231	378582	2	1	4.5	186	0	1
25/01	216268	379184	2	1	1.5	184	0	1
25/02	216268	379184	2	1	4.5	184	0	1
26/01	216125	379220	2	1	1.5	179	0	1
26/02	216125	379220	2	1	4.5	179	0	1
27/01	215673	378866	2	1	1.5	172	0	1
27/02	215673	378866	2	1	4.5	172	0	1

4.2.3 In order to quantify the effect of shadow flicker, the results of the building survey were input into 'WindFarm'.

## 5 ASSESSMENT OF SHADOW FLICKER LEVELS

### 5.1 Predicted Occurrence of Shadow Flicker

5.1.1 Figure A1.2 (in Annex 1) shows the predicted maximum theoretical shadow throw at each point of the grid at 2m above ground level. The figure does not take into account orientation or window height and should only be used for indicative purposes. The figure illustrates the relative distribution of shadow throw around the turbines.

5.1.2 Table 5.1 below details the shadow flicker modelling results and summarises the predicted frequency of occurrence of shadow flicker within the assessment location. For the assessment locations, the windows with the greatest maximum shadow flicker hours per year are shown. Figure A1.3 (in Annex 1) illustrates the times of the year and times of the day when shadow flicker could theoretically occur at the most affected window of the assessed locations.

5.1.3 A detailed listing of the potential for shadow flicker occurrence at the assessment locations is included in Annex 3.

5.1.4 The calculations assume a ‘worst case’ scenario which includes the following assumptions:

- the sun always shines in a clear sky (i.e. no account of climatic conditions such as clouds or precipitation has been made);
- objects surrounding the windows that may block the view to the turbines such as trees and buildings have been disregarded;
- the turbine rotors are always aligned face-on to the window, providing the maximum opportunity for shadow flicker; and
- the rotors are always turning (i.e. no account has been taken of calm winds or shut-down periods).

5.1.5 Similarly, when the sun is close to the horizon, at dawn and dusk, the intensity of the sun’s rays is reduced and is less likely to cast distinct shadows. It is generally considered that when the sun is lower than 2° above the horizon, that shadow flicker is unlikely to occur. This parameter has been included in the calculations.

**Table 5.1: Maximum Theoretical Shadow Flicker Occurrence**

Receptor /Window	Easting	Northing	Windows						Frequency of Shadow Occurrence (days per year)	Max Hours of Shadow per Day	Mean Hours of Shadow per Day	Total Theoretical Hours per Year
			Width (m)	Height (m)	Elevation (m.agl)	Aspect (°from north)	Tilt Angle(°)	No. of Windows				
01/01	216189	375517	1.2	2	1.5	101	0	1	0	0	0	0
01/02	216189	375520	1	0.8	1.8	101	0	1	0	0	0	0
01/03	216189	375524	1.2	2	1.5	101	0	1	0	0	0	0
01/04	216189	375517	1	1.5	4	101	0	1	0	0	0	0
01/05	216189	375520	1	1.5	4	101	0	1	0	0	0	0
01/06	216189	375524	1.2	1	4	101	0	1	0	0	0	0
01/07	216182	375520	1	1	1.5	281	0	1	156	1.16	0.59	92.4
01/08	216182	375524	1	1	1.5	281	0	1	157	1.17	0.59	92.5
01/09	216182	375521	1	1	3.5	281	0	1	158	1.17	0.6	94.2
02/01	216660	376450	1	1.2	1.8	298	0	1	108	0.58	0.37	39.7
02/02	216660	376447	2	1.5	1.5	298	0	1	105	0.59	0.37	39.2

02/03	216660	376443	1	1.2	1.2	298	0	1	98	0.58	0.37	36.4
02/04	216660	376439	2	1.5	1.5	298	0	1	92	0.59	0.39	36.1
02/05	216660	376447	2	1.5	4.5	298	0	1	110	0.59	0.38	41.7
02/06	216660	376445	1	1.2	4.5	298	0	1	106	0.58	0.38	40
02/07	216660	376443	1.5	1.5	4.2	298	0	1	106	0.58	0.37	39.7
02/08	216660	376439	2	1.5	4.5	298	0	1	104	0.59	0.37	38.6
02/09	216662	376433	1.5	1.5	1.5	208	0	1	84	0.58	0.42	34.9
02/10	216667	376433	1.5	1.5	1.5	208	0	1	84	0.58	0.41	34.4
02/11	216662	376433	1	1.5	4.5	208	0	1	85	0.58	0.41	35
02/12	216667	376433	1	1.5	4.5	208	0	1	85	0.58	0.41	34.5
02/13	216668	376435	2.5	1.5	1.5	118	0	1	0	0	0	0
02/14	216668	376442	1.2	2	1.2	118	0	1	0	0	0	0
02/15	216668	376447	2.5	1.5	1.5	118	0	1	0	0	0	0
02/16	216668	376435	2	1.5	4.5	118	0	1	0	0	0	0
02/17	216668	376442	1	1.5	4.5	118	0	1	0	0	0	0
02/18	216668	376447	1.5	1.5	4.5	118	0	1	0	0	0	0
02/19	216664	376450	1.2	2	1.2	118	0	1	0	0	0	0
03/01	216834	377194	1	1.5	1.3	276	0	1	155	0.77	0.51	79.7
03/02	216834	377192	1	1	1.6	276	0	1	154	0.76	0.51	78.6
03/03	216834	377190	0.5	1	1.6	276	0	1	153	0.74	0.51	77.4
03/04	216834	377189	1	1.5	1.6	276	0	1	153	0.75	0.51	78
03/05	216834	377187	1	1.8	1.6	276	0	1	151	0.74	0.51	77.4
03/06	216836	377185	1.5	1	1.5	186	0	1	39	0.49	0.38	14.9
04/01	216781	377805	1.5	2	1.1	270	0	1	73	0.98	0.56	41
04/02	216781	377803	1	1.5	1.6	270	0	1	73	0.98	0.56	40.8
04/03	216783	377796	1	1.5	1.6	180	0	1	71	0.97	0.55	39.2
04/04	216784	377796	1	1.5	1.8	180	0	1	71	0.96	0.55	39.4
04/05	216783	377808	2	1.5	1.8	0	0	1	0	0	0	0
05/01	216871	378080	2	2.5	1.3	238	0	1	107	0.49	0.36	38.2
05/02	216874	378078	4.5	2.5	1.3	148	0	1	75	0.49	0.36	27.2
05/03	216874	378080	4.5	4.5	3	148	45	1	110	0.5	0.36	39.6
05/04	216876	378080	2	2.5	1.3	58	0	1	0	0	0	0
05/05	216871	378085	2	1	1.8	238	0	1	108	0.49	0.35	38.2
05/06	216871	378088	0.5	0.8	1.5	238	0	1	108	0.49	0.35	37.4
05/07	216871	378090	1.5	1	1.8	238	0	1	115	0.49	0.34	38.9
05/08	216871	378084	1	1	4	238	0	1	116	0.49	0.35	40.1
05/09	216871	378086	1	1	4	238	0	1	116	0.49	0.35	40.4
05/10	216871	378090	1	1	4	238	0	1	117	0.49	0.35	40.9
05/11	216871	378080	1	1	2	0	0	1	0	0	0	0
05/12	216871	378080	1	1	2	0	0	1	0	0	0	0
05/13	216871	378080	1	1	2	0	0	1	0	0	0	0
05/14	216871	378080	1	1	2	0	0	1	0	0	0	0
05/15	216871	378080	1	1	2	0	0	1	0	0	0	0
05/16	216871	378080	1	1	2	0	0	1	0	0	0	0
06/01	216583	378115	2	1.3	1.5	270	0	1	109	1.11	0.59	64.3
06/02	216583	378115	2	1.3	4	270	0	1	106	1.12	0.6	63.6
06/03	216583	378113	1	1	1.8	270	0	1	107	1.11	0.59	63.6
06/04	216583	378112	2	1.3	4	270	0	1	106	1.12	0.6	64
06/05	216583	378110	1	1	1.8	270	0	1	107	1.11	0.6	63.9
06/06	216583	378109	1	1	1.5	270	0	1	106	1.11	0.6	64
06/07	216583	378108	2	1.5	4	270	0	1	108	1.12	0.6	64.8
06/08	216583	378106	2	1.5	1.8	270	0	1	109	1.12	0.6	65.5
06/09	216584	378103	1	1.5	1.5	180	0	1	108	1.12	0.6	65.1
06/10	216584	378103	1	1.5	4	180	0	1	106	1.12	0.61	64.3
06/11	216584	378101	2	2	1.1	270	0	1	110	1.12	0.61	66.6
06/12	216584	378102	1	1	3.5	270	45	1	107	1.12	0.6	64.1
06/13	216584	378100	1	1	3.5	270	45	1	107	1.12	0.6	64.4
06/14	216585	378095	1	1.5	1.5	180	0	1	109	1.11	0.6	65.8
06/15	216587	378095	1	1.5	1.5	180	45	1	108	1.11	0.6	65.1
07/01	217119	377988	1	1.7	1.5	297	0	1	0	0	0	0
07/02	217118	377986	1	1.7	1.5	297	0	1	0	0	0	0

07/03	217118	377985	1	1.7	1.5	297	0	1	0	0	0	0
07/04	217117	377981	2	2	2	297	0	1	0	0	0	0
07/05	217118	377979	1	1.7	1.5	297	0	1	0	0	0	0
07/06	217118	377977	1	1.7	1.5	297	0	1	38	0.43	0.34	12.8
07/07	217121	377975	1	1.7	1.5	207	0	1	0	0	0	0
07/08	217121	377973	3	1.7	1.5	297	0	1	40	0.43	0.32	12.9
07/09	217116	377971	2	1.7	1.5	207	0	1	40	0.43	0.33	13
07/10	217129	377980	1	1	1.5	207	0	1	0	0	0	0
07/11	217133	377980	1	1	1.5	207	0	1	0	0	0	0
08/01	215948	378790	2.2	1.5	1.5	165	0	1	0	0	0	0
08/02	215945	378789	1	1.2	1.5	165	0	1	0	0	0	0
08/03	215942	378790	2.2	1.5	1.5	165	0	1	0	0	0	0
08/04	215939	378790	2.2	1.5	1.5	165	0	1	0	0	0	0
08/05	215933	378790	1	1	1.5	165	0	1	0	0	0	0
08/06	215934	378781	1.5	1.2	1.5	345	0	1	0	0	0	0
08/07	215936	378781	1	1.2	1.5	345	0	1	0	0	0	0
08/08	215939	378781	1.5	1.5	1.5	345	0	1	0	0	0	0
08/09	215941	378781	1	1.2	1.5	345	0	1	0	0	0	0
08/10	215943	378781	1.2	2	1.1	345	0	1	0	0	0	0
08/11	215945	378781	15	1.5	1.5	345	0	1	0	0	0	0
08/12	215949	378783	1.2	1	1.5	255	0	1	0	0	0	0
09/01	215796	378120	2	1.7	1.5	32	0	1	0	0	0	0
09/02	215794	378121	1.2	2	1.2	32	0	1	0	0	0	0
09/03	215794	378122	2	1.8	1.5	122	0	1	130	1.17	0.86	112.2
09/04	215790	378118	1	1	1.7	212	0	1	131	1.17	0.85	112
09/05	215786	378117	1	1	1.5	212	0	1	132	1.17	0.85	112.4
09/06	215781	378116	1	1.2	1.5	212	0	1	133	1.16	0.85	113
10/01	215548	377173	1.7	1.5	1.6	58	0	1	175	1.08	0.51	89.7
10/02	215546	377175	1.7	1.5	1.6	58	0	1	177	1.08	0.5	89
10/03	215544	377177	1.7	1.5	1.6	58	0	1	173	1.08	0.51	88.3
10/04	215539	377182	2	2	1.5	58	0	1	171	1.08	0.51	87.3
10/05	215535	377186	1.7	1.5	1.6	58	0	1	170	1.08	0.5	85.3
10/06	215538	377183	1.7	1.5	1.6	238	0	1	107	1.18	0.91	97.1
10/07	215539	377179	1.7	1.5	1.6	238	0	1	108	1.19	0.92	99.2
10/08	215540	377177	1.7	1.5	1.6	238	0	1	109	1.2	0.92	100.4
10/09	215540	377175	1	1	1.6	328	0	1	0	0	0	0
10/10	215540	377173	2	1.5	1.6	148	0	1	214	1.48	0.89	190.3
10/11	215543	377171	1	1	1.6	148	0	1	214	1.48	0.89	189.9
11/01	215410	377174	1	1	1.5	54	0	1	170	0.54	0.36	62
11/02	215412	377173	1	1.5	1.5	54	0	1	172	0.54	0.36	62.3
11/03	215419	377171	1	1	1.5	54	0	1	170	0.54	0.36	61.6
11/04	215423	377170	1	1.5	1.5	54	0	1	168	0.55	0.37	61.8
11/05	215428	377168	1	1.5	1.5	54	0	1	168	0.55	0.37	61.6
11/06	215418	377177	2	1	1.5	144	0	1	201	1.41	0.74	147.8
11/07	215417	377179	2	1.6	1.5	54	0	1	173	0.55	0.37	63.7
11/08	215410	377174	1	1	1.5	54	0	1	170	0.54	0.36	62
12/01	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/02	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/03	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/04	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/05	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/06	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/07	216965	376456	1	1	2	311	0	1	58	0.46	0.36	20.7
12/08	216965	376456	1	1	2	221	0	1	58	0.46	0.35	20.6
12/09	216965	376456	1	1	2	221	0	1	58	0.46	0.35	20.6
12/10	216965	376456	1	1	2	221	0	1	58	0.46	0.35	20.6
12/11	216965	376456	1	1	2	41	0	1	0	0	0	0
12/12	216965	376456	1	1	2	41	0	1	0	0	0	0
12/13	216965	376456	1	1	2	41	0	1	0	0	0	0
13/01	217070	376580	2	1.5	1.5	318	0	1	0	0	0	0
13/02	217070	376580	2	1.5	4	318	0	1	0	0	0	0

13/03	217069	376577	0.5	1	1.5	318	0	1	0	0	0	0
13/04	217069	376577	1.5	1.5	4	318	0	1	0	0	0	0
13/05	217068	376575	2	1.5	1.5	318	0	1	0	0	0	0
13/06	217068	376575	2	1.5	4	318	0	1	0	0	0	0
13/07	217065	376570	1	1.5	4	318	0	1	0	0	0	0
14/01	216036	378570	2.5	1.5	1.5	72	0	1	0	0	0	0
14/02	216036	378570	2.5	1.5	4.5	72	0	1	0	0	0	0
14/03	216032	378568	1	1	4.5	162	0	1	9	0.11	0.08	0.8
14/04	216038	378574	2.2	1.5	1.5	72	0	1	0	0	0	0
14/05	216034	378576	1.5	2	1.1	72	0	1	0	0	0	0
14/06	216034	378579	2.2	1.5	1.5	72	0	1	0	0	0	0
14/07	216028	378582	1.5	2	1.1	72	0	1	0	0	0	0
14/08	216026	378580	1	1	3	252	0	1	9	0.11	0.09	0.8
14/09	216028	378577	2	1	3	252	0	1	11	0.12	0.1	1
14/10	216028	378574	1	1	3	252	0	1	13	0.14	0.1	1.3
14/11	216028	378572	1.5	1	3	252	0	1	13	0.15	0.12	1.6
14/12	216028	378571	1	1	3	252	0	1	13	0.16	0.13	1.7
14/13	216028	378569	1	1	3	252	0	1	15	0.17	0.13	1.9
14/14	216028	378571	1.5	1	5	252	0	1	7	0.09	0.08	0.5
14/15	216028	378569	1.5	1	5	252	0	1	9	0.11	0.09	0.8
15/01	215160	378218	1	1.5	1.5	277	0	1	0	0	0	0
15/02	215160	378211	1	1.5	1.5	277	0	1	0	0	0	0
15/03	215160	378209	2	1.5	1.5	277	0	1	0	0	0	0
15/04	215160	378205	1	1.5	1.5	277	0	1	0	0	0	0
15/05	215160	378218	1	1.5	4.5	277	0	1	0	0	0	0
15/06	215160	378212	1	1.5	4.5	277	0	1	0	0	0	0
15/07	215160	378209	1	1.5	4.5	277	0	1	0	0	0	0
15/08	215160	378205	1	1.5	4.5	277	0	1	0	0	0	0
15/09	215168	378206	1	1.5	1.5	92	0	1	43	0.44	0.34	14.6
15/10	215169	378208	1	1.5	1.5	182	0	1	43	0.44	0.34	14.7
15/11	215174	378210	2	1.5	1.5	92	0	1	43	0.44	0.35	14.9
15/12	215172	378212	2	1.5	1.5	2	0	1	0	0	0	0
15/13	215169	378212	0.5	0.5	1.8	2	0	1	0	0	0	0
15/14	215167	378213	2	1	1.5	92	0	1	42	0.44	0.35	14.6
16/01	216028	378669	1	1	1.5	166	0	1	0	0	0	0
16/02	216032	378669	1	1.5	1.5	166	0	1	0	0	0	0
16/03	216036	378669	1	1.5	1.5	166	0	1	0	0	0	0
16/04	216026	378671	1.5	1.5	1.5	256	0	1	0	0	0	0
16/05	216026	378675	1.5	1.5	1.5	256	0	1	0	0	0	0
16/06	216028	378678	1.2	1.2	1.5	346	0	1	0	0	0	0
16/07	216031	378677	1.2	1.2	1.5	346	0	1	0	0	0	0
16/08	216035	378677	1.2	1.2	1.5	346	0	1	0	0	0	0
17/01	216009	378609	2	1.2	1.5	340	0	1	0	0	0	0
17/02	216005	378608	1	1	1.5	340	0	1	0	0	0	0
17/03	216003	378610	2	1.6	1.4	340	0	1	0	0	0	0
17/04	215998	378609	2	1.2	1.5	340	0	1	0	0	0	0
17/05	216011	378605	1	1	1.5	70	0	1	0	0	0	0
17/06	216009	378600	1.8	1.5	1.5	160	0	1	10	0.11	0.09	0.9
17/07	216003	378600	2	1.5	1.5	160	0	1	13	0.14	0.11	1.4
17/08	215998	378598	1.8	1.5	1.5	160	0	1	15	0.17	0.14	2.1
18/01	216094	378289	1	1.2	1.5	162	0	1	64	1.42	0.93	59.4
18/02	216091	378289	1.2	1.2	1.5	162	0	1	65	1.42	0.92	60
18/03	216088	378289	1	1	1.5	162	0	1	65	1.42	0.93	60.1
18/04	216085	378289	1.2	1.2	1.5	162	0	1	65	1.43	0.94	60.9
18/05	216082	378289	1	1.2	1.5	162	0	1	65	1.43	0.94	61.1
18/06	216094	378290	1.2	1	1.5	72	0	1	40	0.39	0.31	12.6
18/07	216079	378292	1	1	1.5	252	0	1	65	1.01	0.71	46.3
18/08	216079	378298	1.2	1.2	1.5	342	0	1	0	0	0	0
18/09	216080	378298	1.2	1.2	1.5	342	0	1	0	0	0	0
18/10	216082	378298	2	1.2	1.5	342	0	1	0	0	0	0
18/11	216088	378298	1.6	1.5	1.5	342	0	1	0	0	0	0

18/12	216091	378298	1.2	1.2	1.5	342	0	1	0	0	0	0
18/13	216094	378298	1.2	1.2	1.5	342	0	1	0	0	0	0
19/01	215785	378202	2	1	1.5	173	0	1	114	0.7	0.57	64.7
19/02	215785	378202	2	1	4.5	173	0	1	112	0.69	0.57	63.5
20/01	216115	378498	2	1	1.5	178	0	1	21	0.24	0.19	3.9
20/02	216115	378498	2	1	4.5	178	0	1	15	0.17	0.13	1.9
21/01	216118	378397	2	1	1.5	178	0	1	44	0.5	0.4	17.6
21/02	216118	378397	2	1	4.5	178	0	1	41	0.47	0.38	15.4
22/01	216152	378448	2	1	1.5	181	0	1	30	0.34	0.27	8.1
22/02	216152	378448	2	1	4.5	181	0	1	25	0.3	0.23	5.9
23/01	217141	378041	2	1	1.5	230	0	1	0	0	0	0
23/02	217141	378041	2	1	4.5	230	0	1	0	0	0	0
24/01	216231	378582	2	1	1.5	186	0	1	0	0	0	0
24/02	216231	378582	2	1	4.5	186	0	1	0	0	0	0
25/01	216268	379184	2	1	1.5	184	0	1	0	0	0	0
25/02	216268	379184	2	1	4.5	184	0	1	0	0	0	0
26/01	216125	379220	2	1	1.5	179	0	1	0	0	0	0
26/02	216125	379220	2	1	4.5	179	0	1	0	0	0	0
27/01	215673	378866	2	1	1.5	172	0	1	0	0	0	0
27/02	215673	378866	2	1	4.5	172	0	1	0	0	0	0

## 5.2 Evaluation of Effects

5.2.1 Under worst case conditions, the maximum theoretical occurrence of shadow flicker for a financially involved property amounts to 190.3 hours per year, experienced at the most affected window of H10, located to the west of the development. The times of day when shadow flicker could theoretically occur at this window are in the early morning and afternoon time from January to May, and July to December. For a non-financially involved property, the maximum theoretical occurrence of shadow flicker amounts to 79.7 hours per year at the most affected window of H3 (31 Shanaghy Road), located to the east of the development. The times of day when shadow flicker could theoretically occur at this window are in the late afternoon to early evening time from February to August and October. The distribution of shadow flicker occurrence for the assessed receptors is shown in Figure A1.3 (in Annex 1).

5.2.2 The instances of shadow flicker will always be less than that predicted by the model as these are based on a worst case scenario. The occurrence of shadow flicker is only possible during the operation of the wind turbines (i.e. when the rotor blades are turning) and when the sky is clear enough to cast shadows. It is important to consider the following facts when making an assessment:

- climatic conditions dictate that the sun is not always shining. Regional Met Office data gives actual sunshine hours for the 'North West' region to be 31.5% of total daylight hours<sup>5</sup>. Cloud cover during other times may obscure the sun and prevent shadow flicker occurrence. While some shadow may still be cast under slightly overcast conditions, no shadow at all would be cast when heavy cloud cover prevails. It is considered that weather conditions will reduce actual occurrence of shadow flicker by at least half, compared to calculated levels;

<sup>5</sup> <http://www.ballykelly.climatemps.com/sunlight.php> (Last Accessed 06/01/2016)

- objects such as trees or walls may surround windows and obscure the view of the turbine and hence prevent shadow flicker. There are some instances of this occurring at some of the receptors surrounding the development and has been noted in section 4.1;
- during operation, the turbine rotors would automatically orientate themselves to face the prevailing wind direction. This means the turbine rotors will not always be facing the affected window and in fact will sometimes be 'side-on' to the window. Very little of the blade movement would be visible during such occurrences and therefore the potential for shadow flicker is reduced. At the development, the wind predominately blows between the south and west; therefore, for a larger amount of time the turbine blades would be oriented away from some of the assessed receptors;
- the turbine would not operate for 100% of daylight hours. During periods of very low wind speed or very high wind speed or maintenance shut-downs, the rotors do not turn. During such periods shadow flicker is not possible. IWEA states that turbines can produce energy 90-95%<sup>6</sup> of the time; and
- This assessment has taken a worst case approach by assuming that all shadow (no matter how faint) will be noticeable contrary to the common assumption that shadows become relatively faint at distances greater than 10 rotor diameters. The assessment considers shadows cast by turbines up to 930m away from the property and it is possible that shadows cast by the turbines located further away will not actually be noticeable in practice.

5.2.3 As mentioned above, shadow flicker can only occur during daylight hours and when the sun is shining. The total theoretical hours per year given in Table 5.1 above assumes all hours of daylight are sunny with clear skies. For the most affected window at the most affected receptor, H10 (22 Pullytean Road), the total theoretical shadow flicker hours are 190.3 hours per year. Using historical data provided by Climatemps, the total theoretical hours can be reduced. Actual sunshine hours is given to be 31.5% of all daylight hours; therefore, the potential 'likely' hours of shadow flicker per year may be reduced to approximately 60 hours. Taking into account the IWEA estimate that wind turbines operate between 90-95% of the time, taking the higher value of 95%, the figure may be further reduced to approximately 57 hours. This exceeds the 30 hours per year threshold stated in PPS18.

5.2.4 For the most affected non-financially involved receptor, H3 (31 Shanaghy Road), the total theoretical shadow flicker hours are 79.7 hours per year. Using historical data provided by Climatemps, the total theoretical hours can be reduced. Actual sunshine hours is given to be 31.5% of all daylight hours; therefore, the potential 'likely' hours of shadow flicker per year may be reduced to approximately 25.1 hours. Taking into account the IWEA estimate that wind turbines operate between 90-95% of the time, taking the higher value of 95%, the figure may be further reduced to approximately 23.9 hours. This is below the 30 hours per year threshold stated in PPS18.

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<sup>6</sup> <http://www.iwea.com/index.cfm/page/windenergymyths1> (Last Accessed 06/01/2016)

5.2.5 The values do not take account of the other factors listed in Section 5.2.2 above which would reduce levels further. The figures are given only as a guide to illustrate difference between theoretical and 'likely' hours.

### 5.3 Photosensitive Epilepsy

5.3.1 The flickering effect caused by shadow flicker can have the potential to induce epileptic seizures through a condition known as photosensitive epilepsy. Around one in one hundred and thirty people in the UK have epilepsy although only 5% of these suffer from photosensitive epilepsy. The common frequency at which photosensitive epilepsy might be triggered varies from person to person, though generally it is between 3 and 30 flashes per second (hertz (Hz)); sensitivity under 3 hertz is not common (The National Society for Epilepsy, 2015)<sup>7</sup>. Most commercial wind turbines in the UK rotate much slower than this, at between 0.3 and 1.0 Hz; therefore, health effects arising from shadow flicker will not have the potential to occur unless the operating frequency of a particular turbine is between 3 and 30 Hz and all other pre-conditions for shadow flicker effects to occur exist.

5.3.2 The turbine chosen to be installed on the development is the Siemens SWT-2.3-93. This wind turbine usually operates between 6 and 16 revolutions per minute (rpm), or 0.3 to 0.8 Hz (flash rate for three bladed turbine), which is significantly less than the 3 to 30 Hz frequency range generally thought to induce photosensitive epilepsy. Consequently, shadow flicker caused by the development is predicted to have no adverse health effects.

5.3.3 Harding et al (2008)<sup>8</sup> have reported that flash frequency should be kept to below 3 flashes per second (i.e. 60 revolutions per minute for a three-bladed turbine). This flash rate also applies to cumulative impacts whereby the shadows of one turbine fall upon another. There are several receptors that may receive shadow flicker from more than one turbine simultaneously. However, no more than two turbines have been found to affect any receptor at the same time, thus the maximum theoretical flash frequency that could occur at these receptors is between 0.6 and 1.6 Hz (considering six blades out of phase). This is significantly less than the 3 to 30 Hz frequency range and thus shadow flicker is predicted to have no adverse health affects.

### 5.4 Mitigation Measures

5.4.1 Where particular combinations of circumstances arise which increase the potential for nuisance, mitigation may be required to reduce the level of exposure to acceptable levels.

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<sup>7</sup> <http://www.epilepsysociety.org.uk/photosensitive-epilepsy> (last accessed 06/01/2016)

<sup>8</sup> Wind turbines, flicker, and photosensitive epilepsy: Characterizing the flashing that may precipitate seizures and optimizing guidelines to prevent them - <http://onlinelibrary.wiley.com/doi/10.1111/j.1528-1167.2008.01563.x/full> (last accessed 06/01/2016)

- 5.4.2 Mitigation measures are available to counteract shadow flicker occurrence to reduce the possibility of nuisance. If shadow flicker is found to cause a nuisance, mitigation measures can be implemented in order to reduce or eliminate the occurrence. Such measures could be secured via installation of a shadow flicker control system for the considered candidate wind turbines.

## 6 CONCLUSIONS

- 6.1.1 A shadow flicker assessment has been undertaken for receptors proximate to the consented Tievenameenta Wind Farm.
- 6.1.2 Following a desktop assessment, fourteen assessment locations were situated within 10 rotor diameters of the fifteen approved wind turbines (the theoretical area as stated in PPS 18: Best Practice Guidance (2009) to which shadow flicker is expected to have an effect on receptors around wind farms). Four additional assessment locations were included in the assessment due to their proximity to the 10 rotor diameter study area and a further nine in planning, for a total of 27 assessment locations.
- 6.1.3 The maximum worst-case shadow flicker occurrence at the most affected window for the most affected financially involved receptor, H10 - 22 Pullytean Road, is predicted to be 190.3 hours per year. This is reduced to 57 hours based on actual sunshine hours and likely operating times of the turbines. This exceeds the 30 hours per year threshold stated in PPS18. The times of day when shadow flicker could theoretically occur at this location is in the early morning and afternoon time from January to May, and July to December.
- 6.1.4 For a non-financially involved property, the maximum theoretical occurrence of shadow flicker amounts to 79.7 hours per year at the most affected window of H3 - 31 Shanaghy Road, located to the east of the development. This is reduced to 23.9 hours based on actual sunshine hours and likely operating times of the turbines. This is below the 30 hours per year threshold stated in PPS18. The times of day when shadow flicker could theoretically occur at this window are in the late afternoon to early evening time from February to August and October.
- 6.1.5 The results do not take into account weather conditions (i.e. no sun or partially cloudy), local visual obstructions (noted in section 4.1), turbine orientation and turbine operation. In reality, the amount of time when shadow flicker could theoretically occur may be less than the maximum value predicted. It is also important to note that affected windows may well be in rooms that are not generally in use at the times when the effect may occur.
- 6.1.6 There are several receptors that may receive shadow flicker from two turbines simultaneously. The maximum theoretical flash frequency that could occur at these properties is between 0.6 and 1.6 Hz (considering six blades out of phase). This is significantly less than the 3 to 30 Hz frequency range and thus shadow flicker is predicted to have no adverse health affects.
- 6.1.7 Mitigation measures are available to counteract shadow flicker occurrence to reduce the possibility of nuisance. If shadow flicker is found to cause a nuisance, mitigation measures can be implemented in order to reduce or eliminate the occurrence. Such measures could be secured via installation of a shadow flicker control system for the considered candidate wind turbines.

## 7 REFERENCES

[http://www.planningni.gov.uk/index/policy/planning\\_statements\\_and\\_supplementary\\_planning\\_guidance/planning\\_policy\\_statement\\_18\\_renewable\\_energy.pdf](http://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18_renewable_energy.pdf) (Last accessed 06/01/2016)

[http://www.planningni.gov.uk/index/policy/planning\\_statements\\_and\\_supplementary\\_planning\\_guidance/planning\\_policy\\_statement\\_18\\_renewable\\_energy\\_best\\_practice\\_guidance.pdf](http://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18_renewable_energy_best_practice_guidance.pdf) (Last accessed 06/01/2016)

Irish Wind Energy Association, *Best Practice Guidelines for the Irish Wind Energy Industry*,

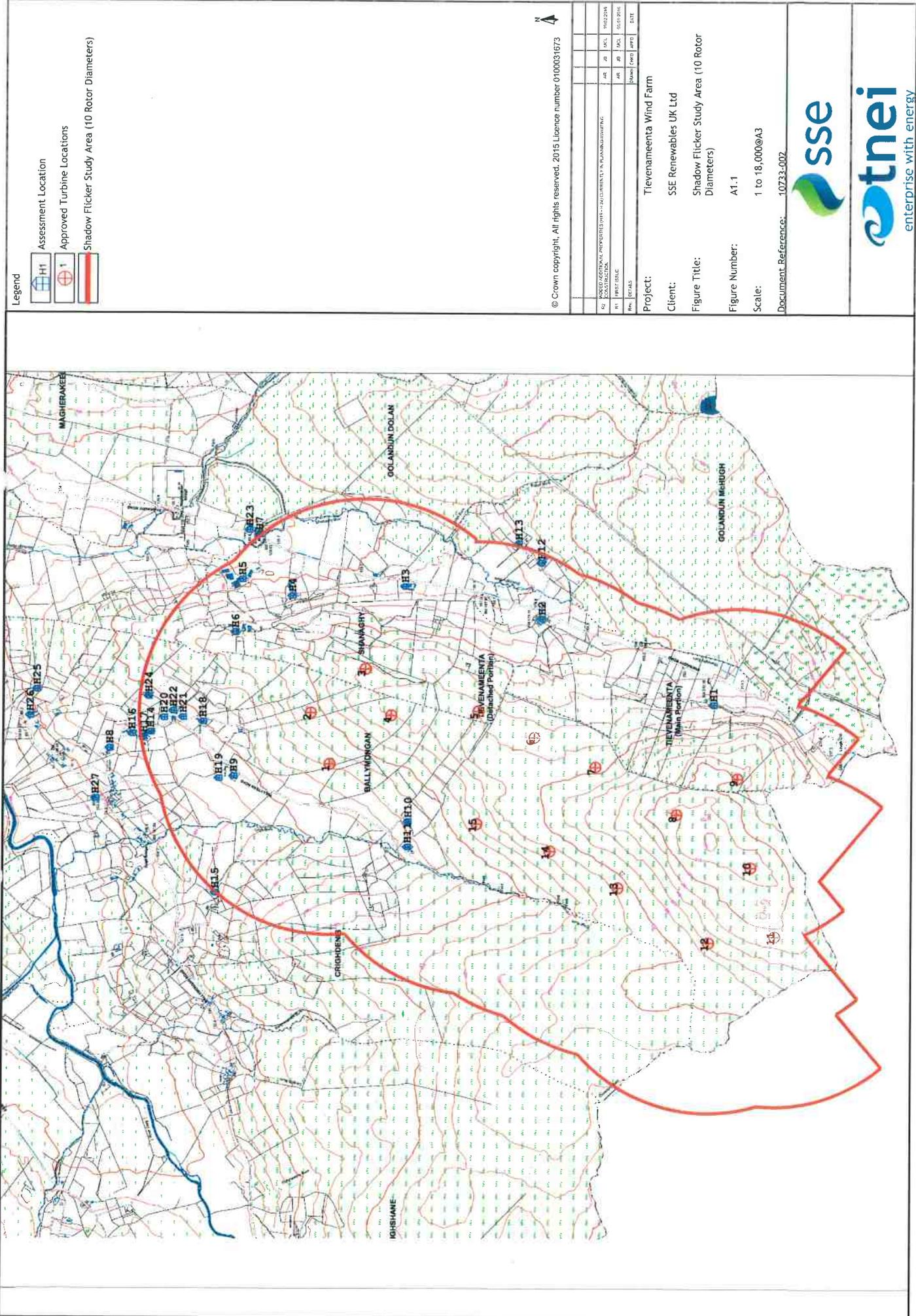
<http://www.iwea.com/contentFiles/Documents%20for%20Download/Publications/News%20Items/IWEA%20Best%20Practice%20Guidelines%20March%202012.pdf> (Last accessed 06/01/2016)

ReSoft Ltd (1997-2014) WindFarm Release 4.2. WindFarm is an industry standard software package developed by ReSoft Ltd, which includes modules for the design of wind turbine locations, visual impact assessment, noise levels, shadow flicker and energy yield estimations.

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## ANNEX 1 - Figures and Results

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Legend

-  Assessment Location
-  Approved Turbine Locations
-  Shadow Flicker Study Area (10 Rotor Diameters)

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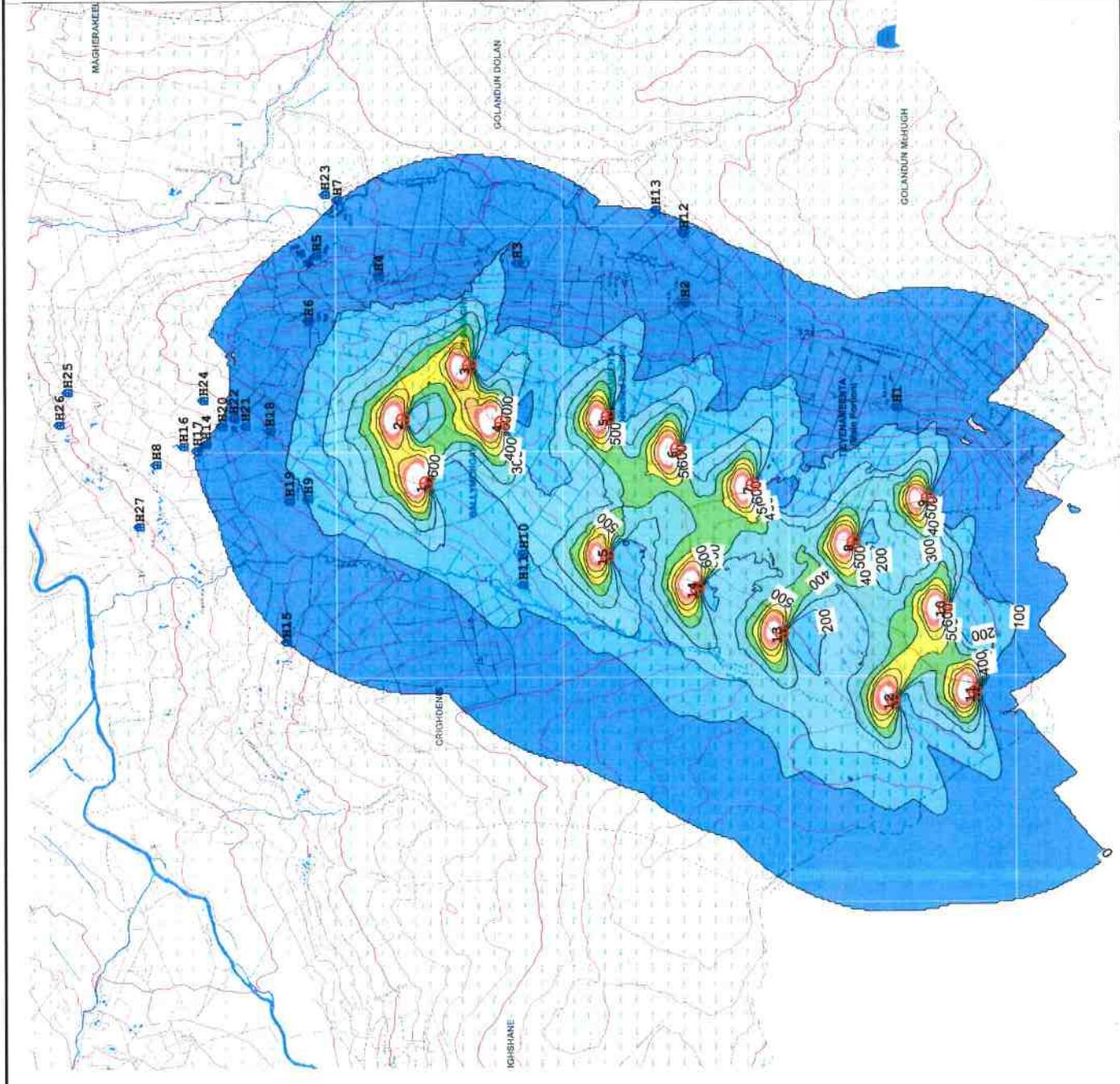
REV	DESCRIPTION	DATE	BY	CHKD	APP'D
01	ISSUE FOR PERMITTING	10/02/2016	AR	AR	AR
02	REVISED	10/02/2016	AR	AR	AR
03	REVISED	10/02/2016	AR	AR	AR

Project: Tievnameenta Wind Farm  
 Client: SSE Renewables UK Ltd  
 Figure Title: Shadow Flicker Study Area (10 Rotor Diameters)  
 Figure Number: A1.1  
 Scale: 1 to 18,000@A3  
 Document Reference: 10733-002



Legend

-  Assessment Location
-  Approved Turbine Locations
-  Total Maximum hours of shadow throw in a year at 2m above ground level(contour lines drawn at increments of 100hrs/year)

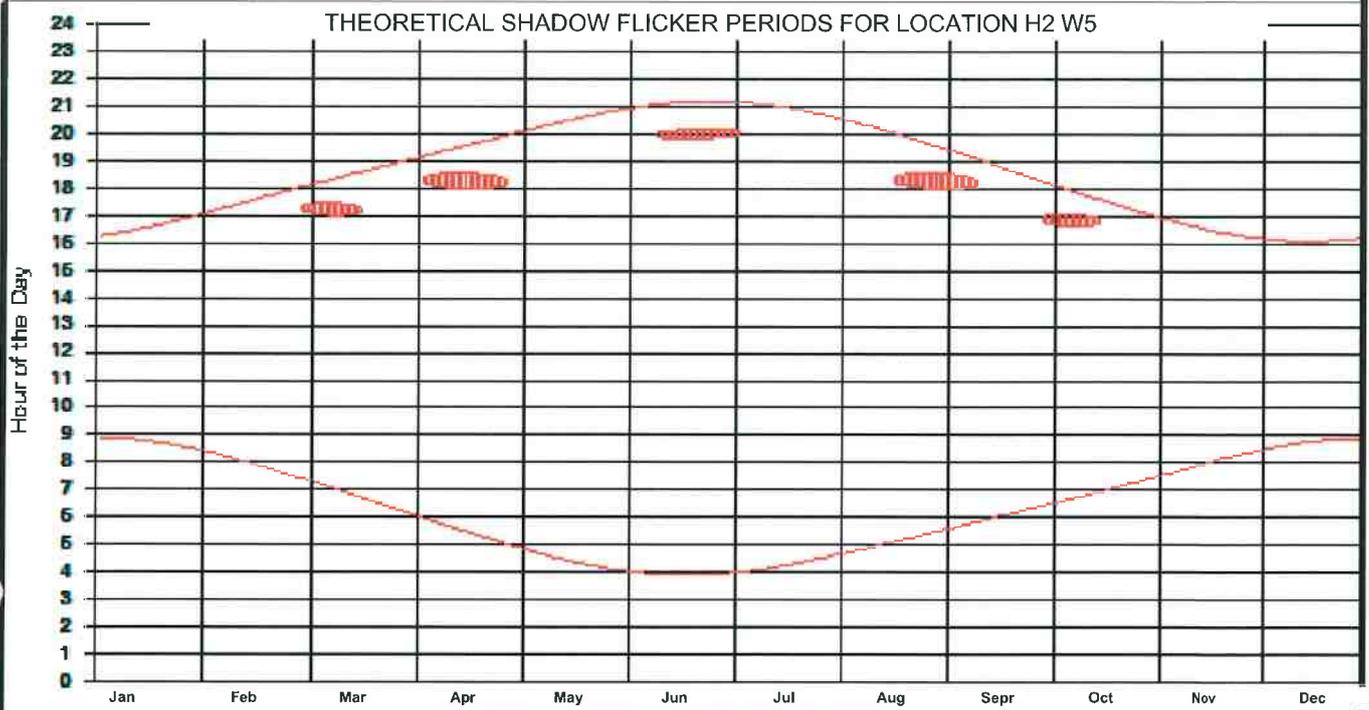
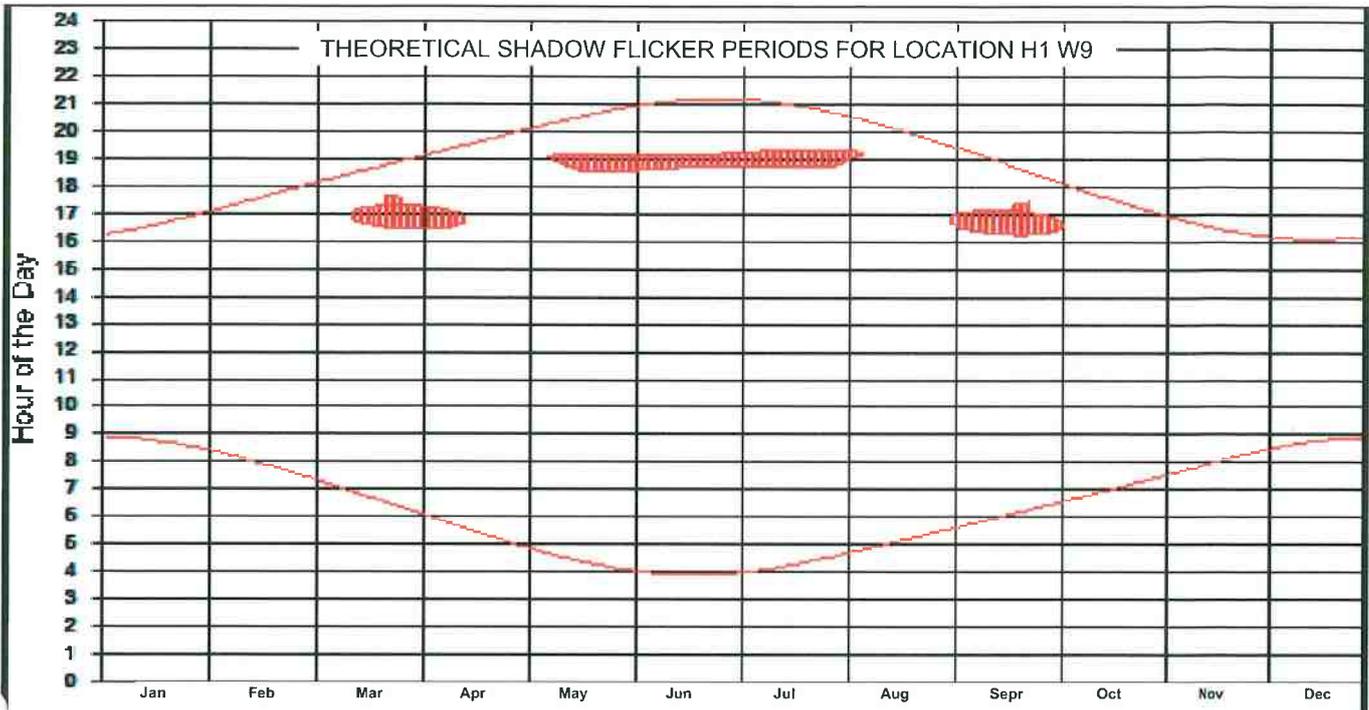


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102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139
140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158

Project: Tevenameenta Wind Farm  
 Client: SSE Renewables UK Ltd  
 Figure Title: Shadow Flicker Contour Plot (10RD)  
 Figure Number: A1-2  
 Scale: 1 to 18,000@A3  
 Document Reference: 10733-003

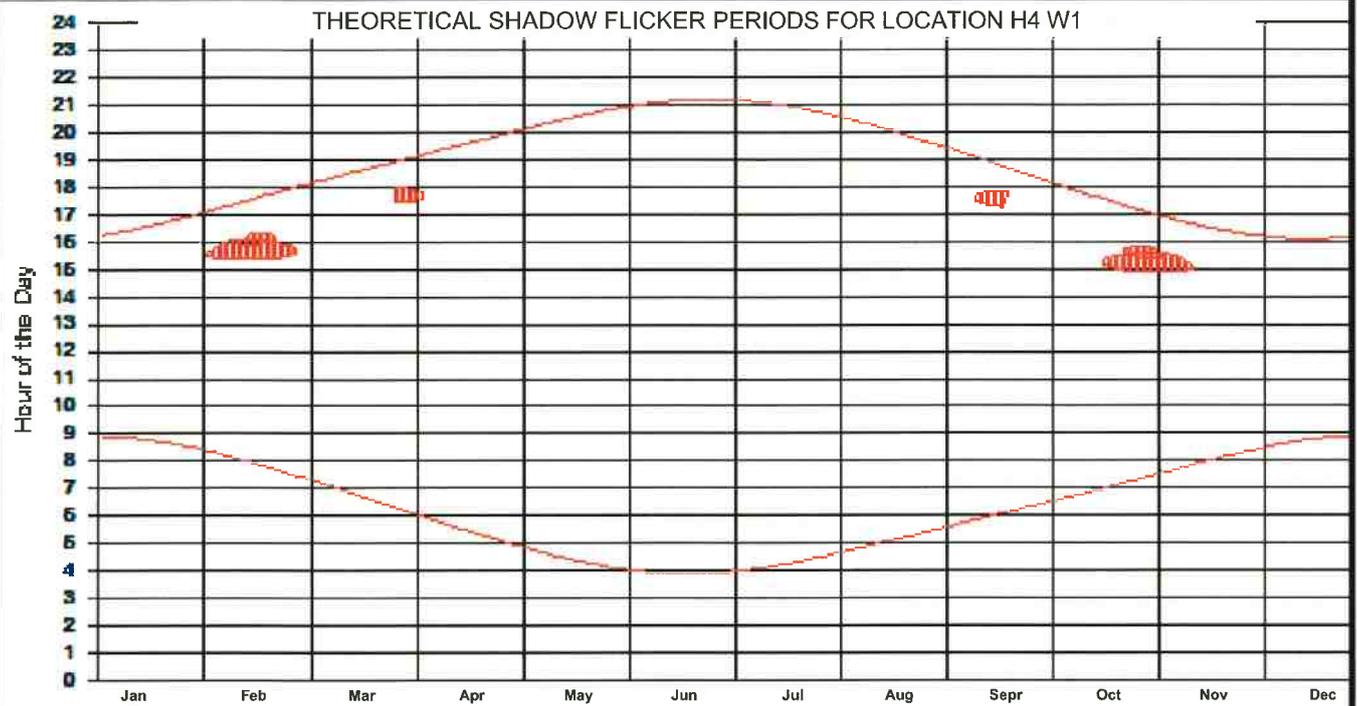
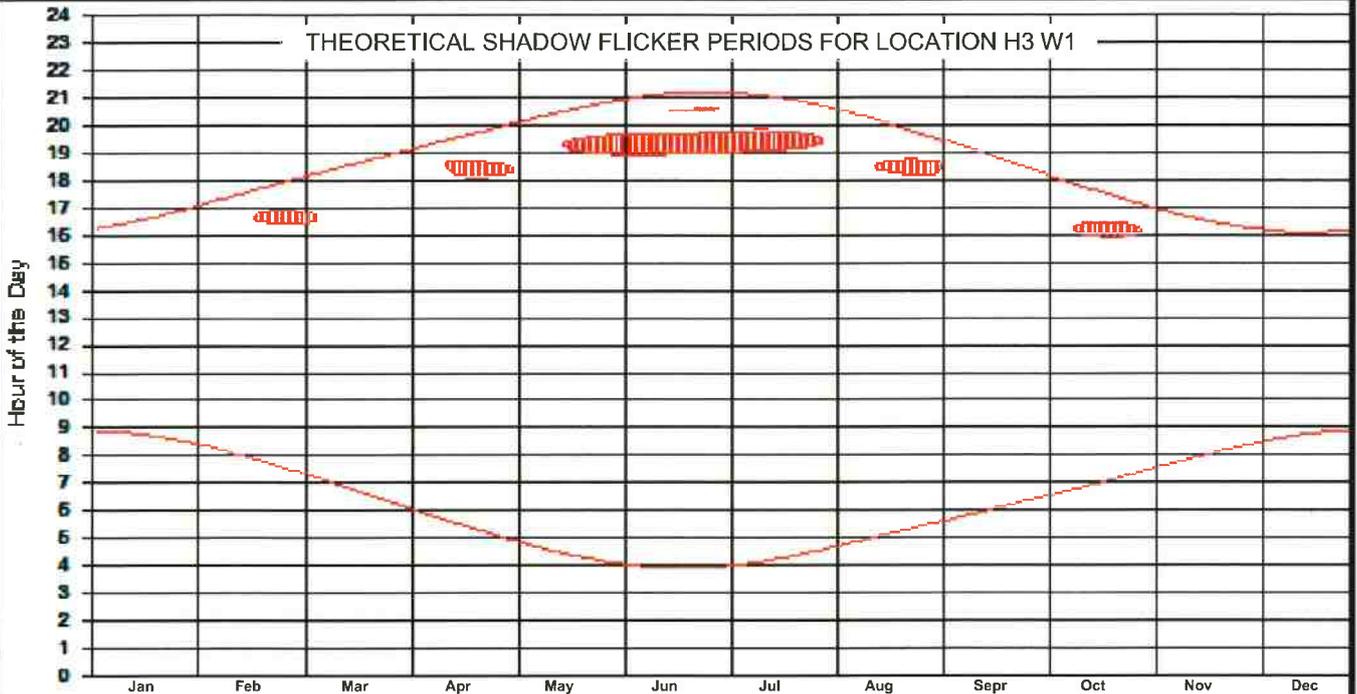




R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3a  
 Scale: NTS  
 Document Reference: 10733-004

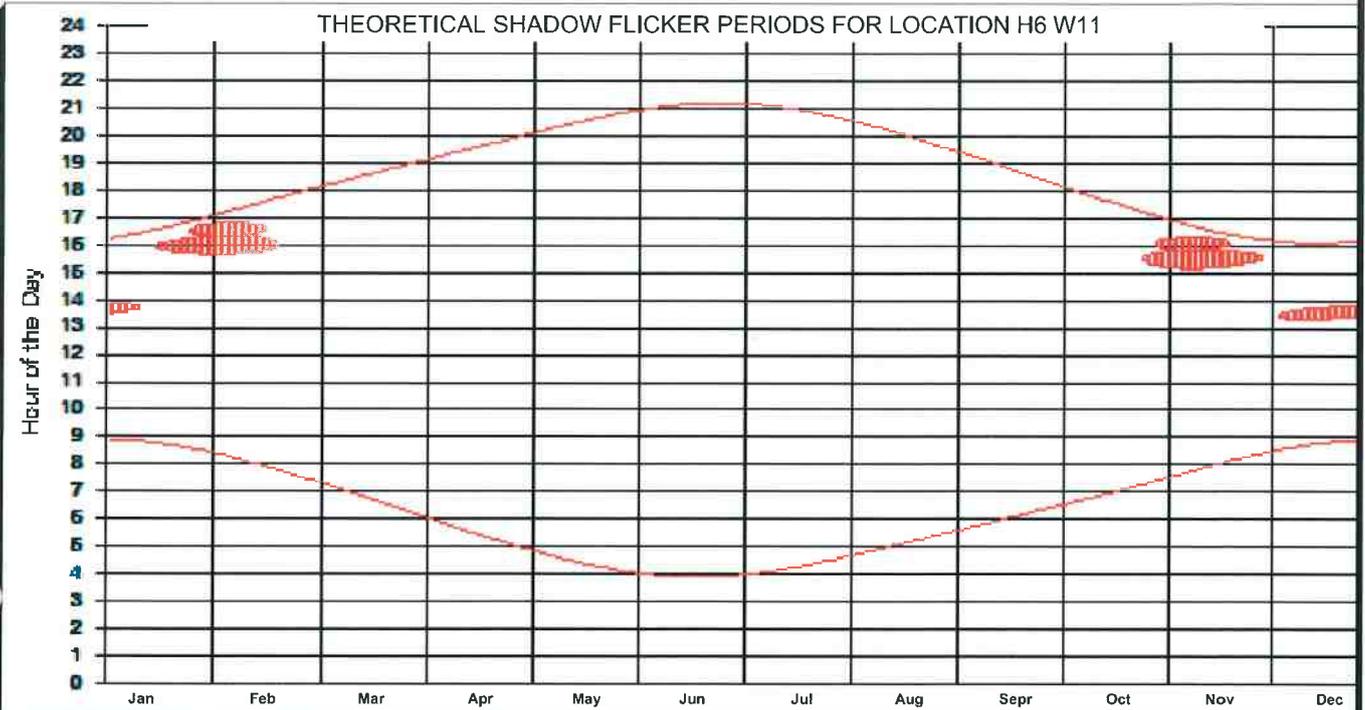
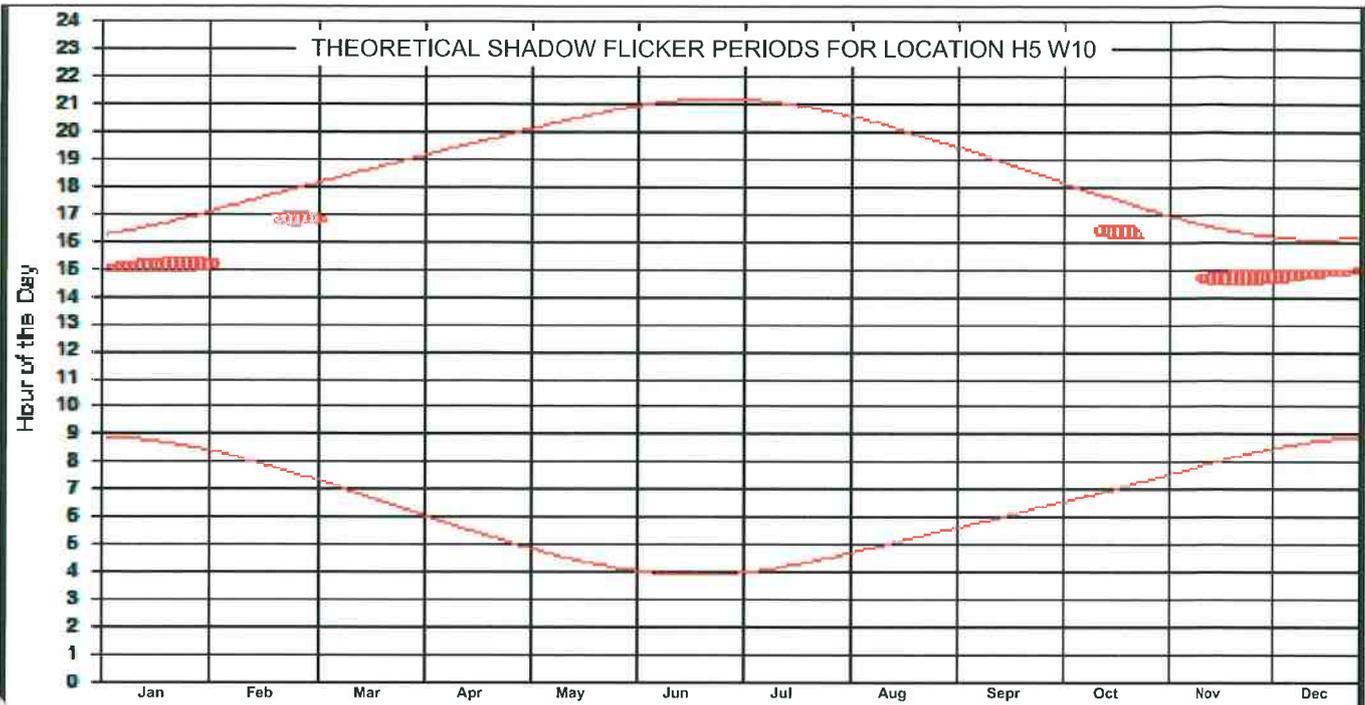


R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3b  
 Scale: NTS  
 Document Reference: 10733-004

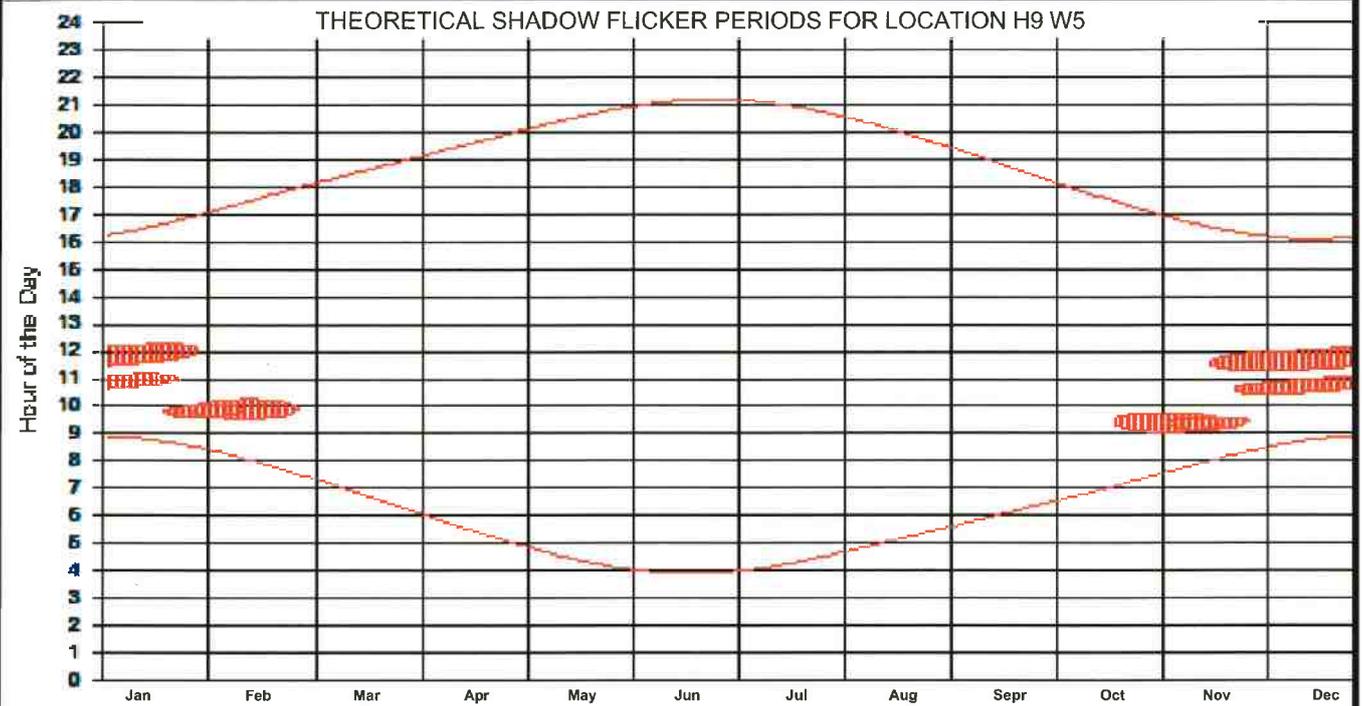
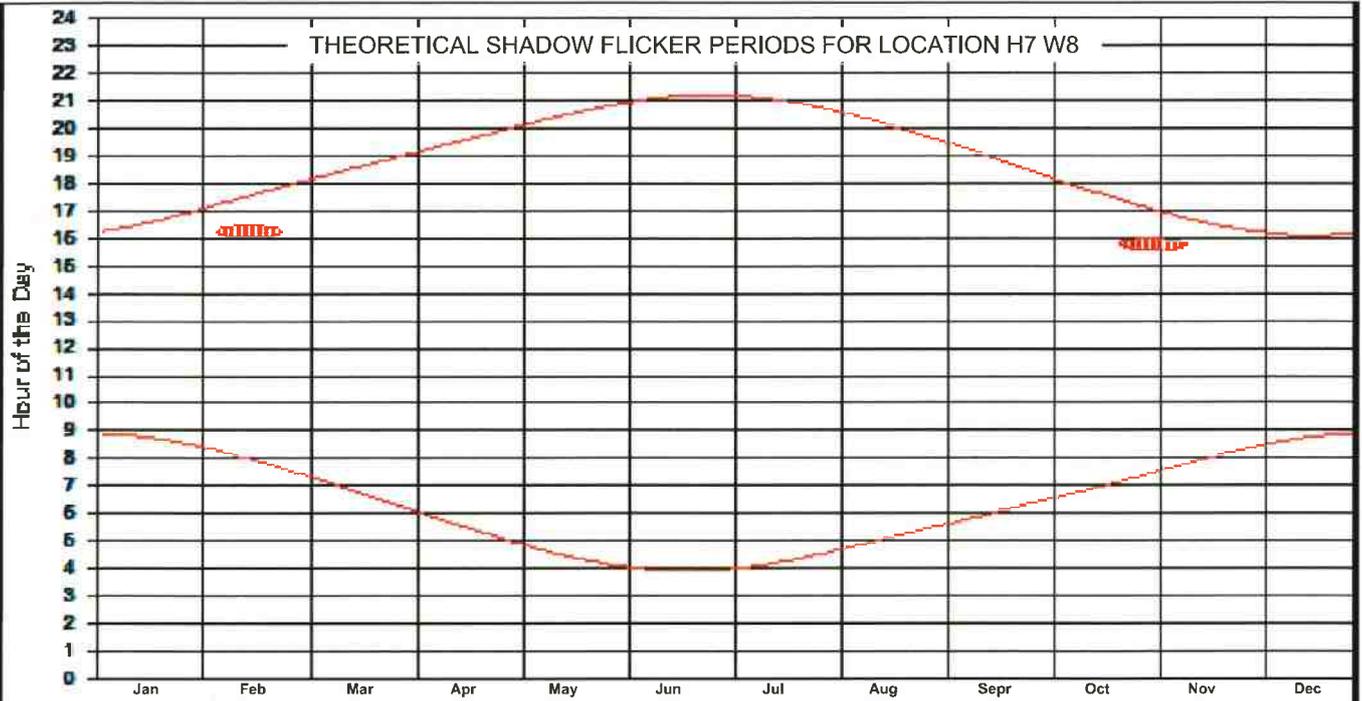


R1	FIRST ISSUE	AR	MC	MC	07/01/2015
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3c  
 Scale: NTS  
 Document Reference: 10733-004



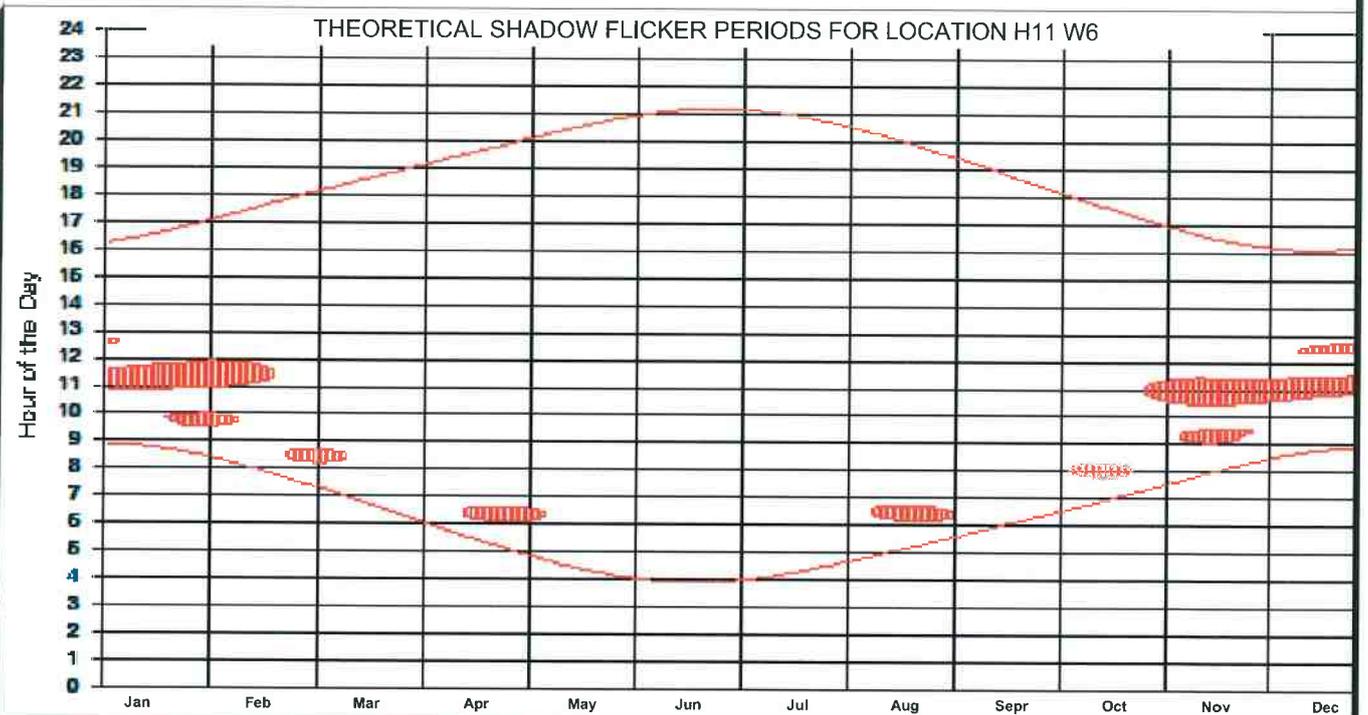
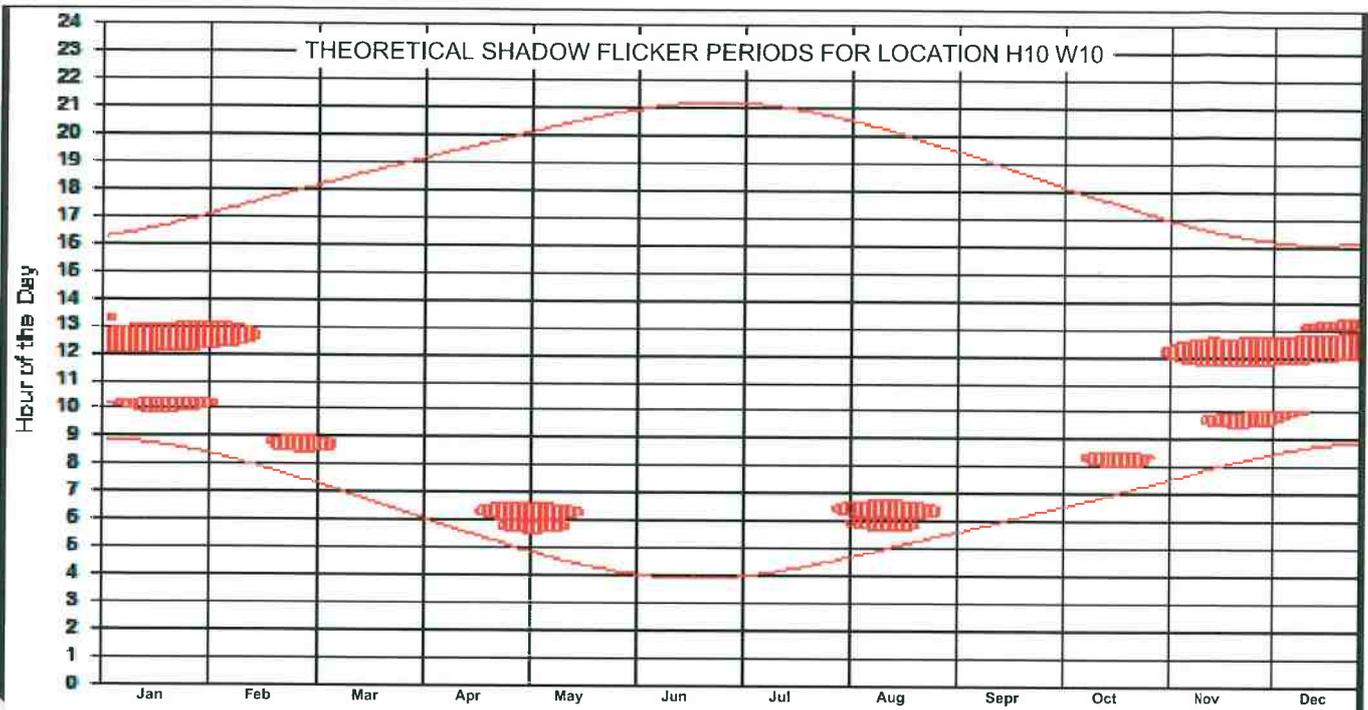



R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3d  
 Scale: NTS  
 Document Reference: 10733-004



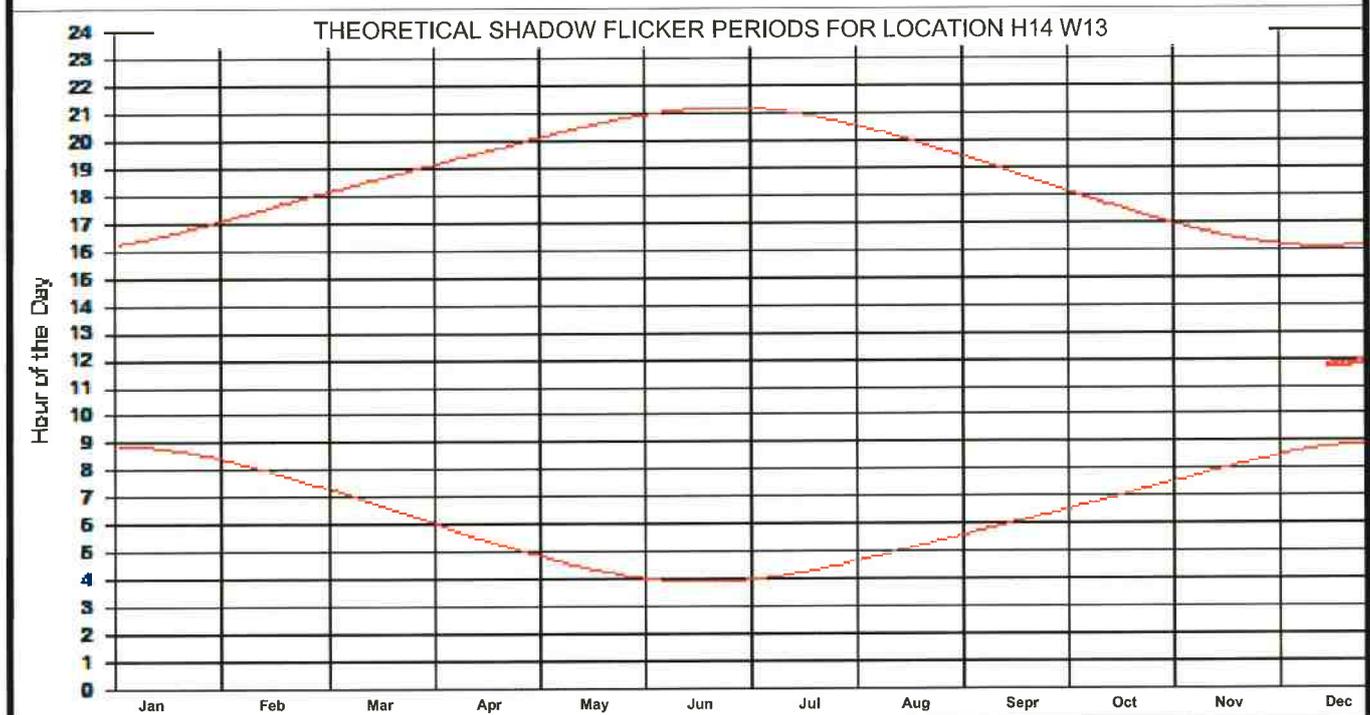
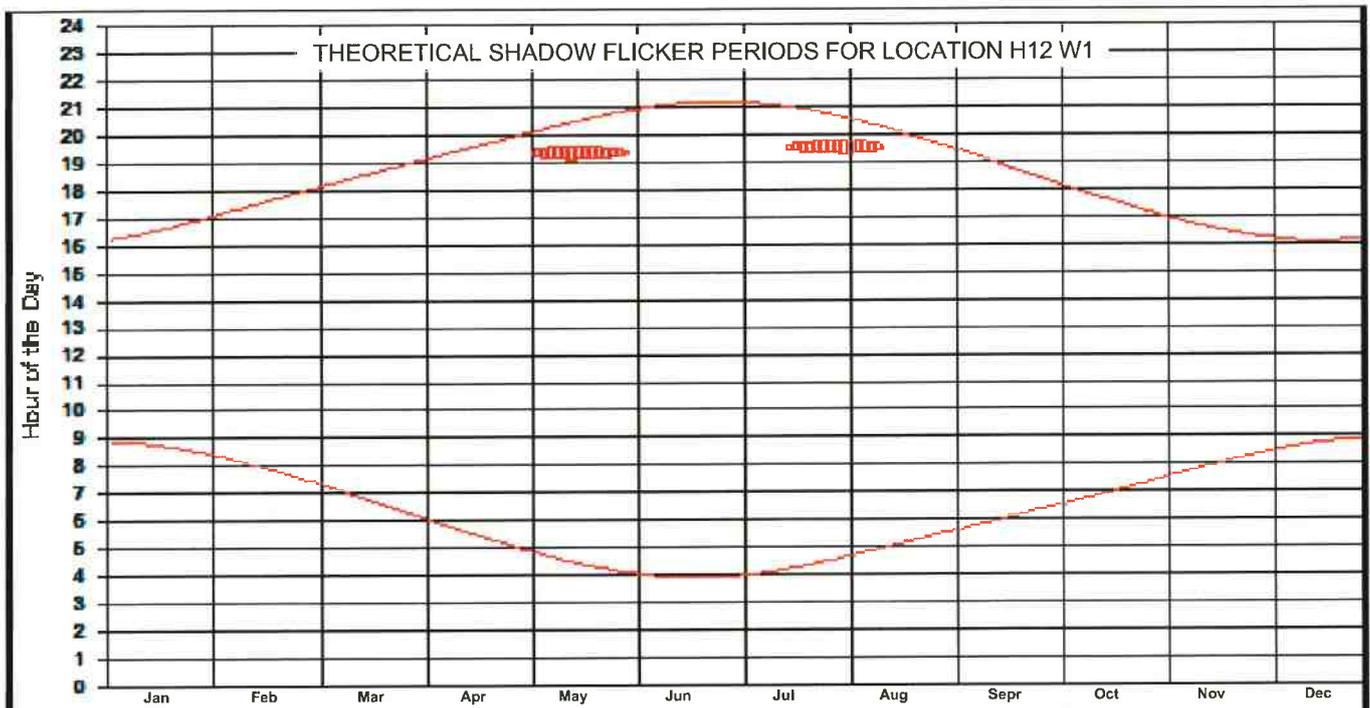




R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3e  
 Scale: NTS  
 Document Reference: 10733-004



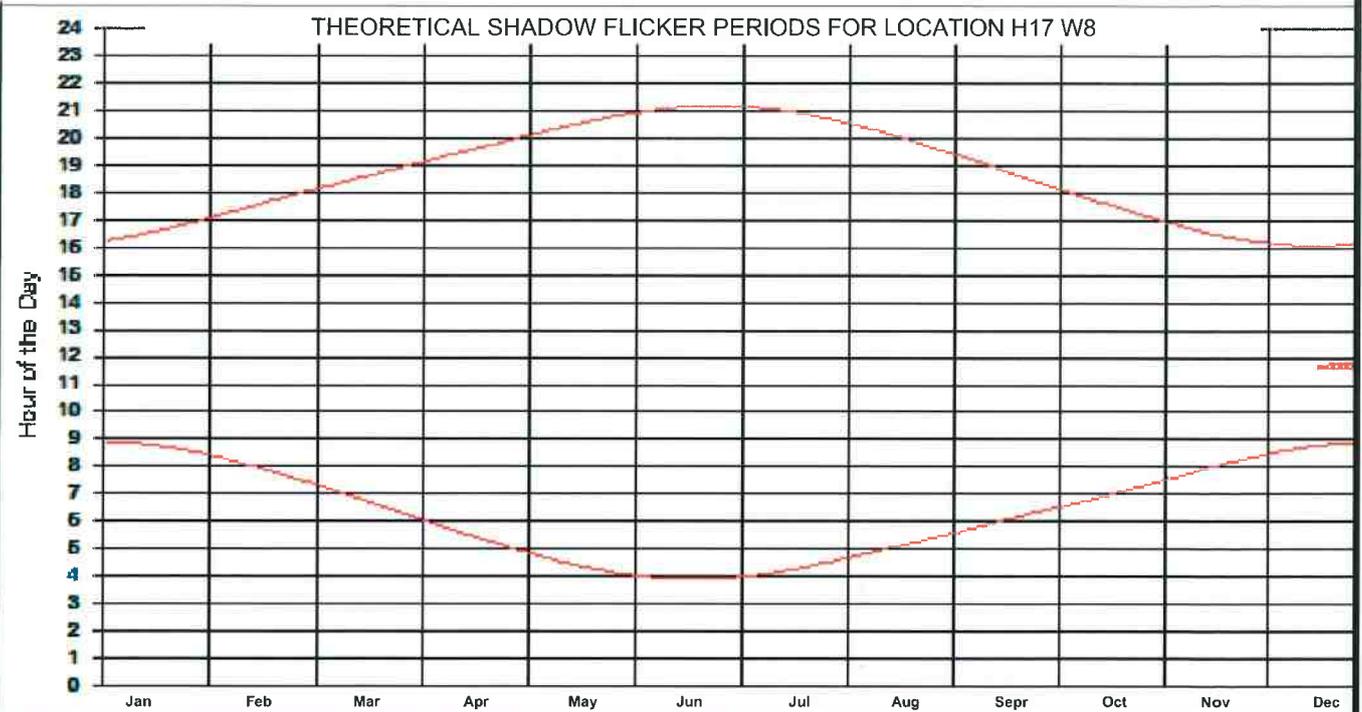
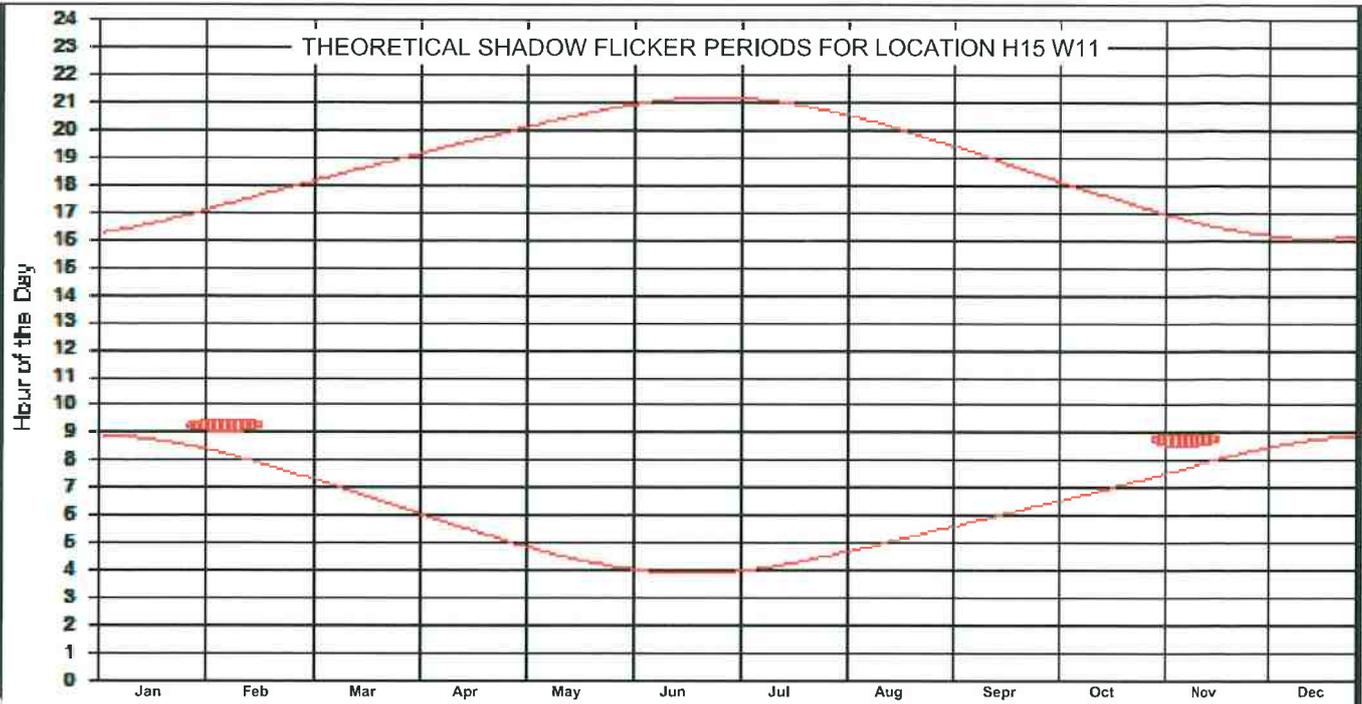


R1	FIRST ISSUE	AR	MC	MC	07/01/2018
REV.	DETAILS	DRAWN	CHK'D	APP'D	Date

Project: Tievnameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3f  
 Scale: NTS  
 Document Reference: 10733-004



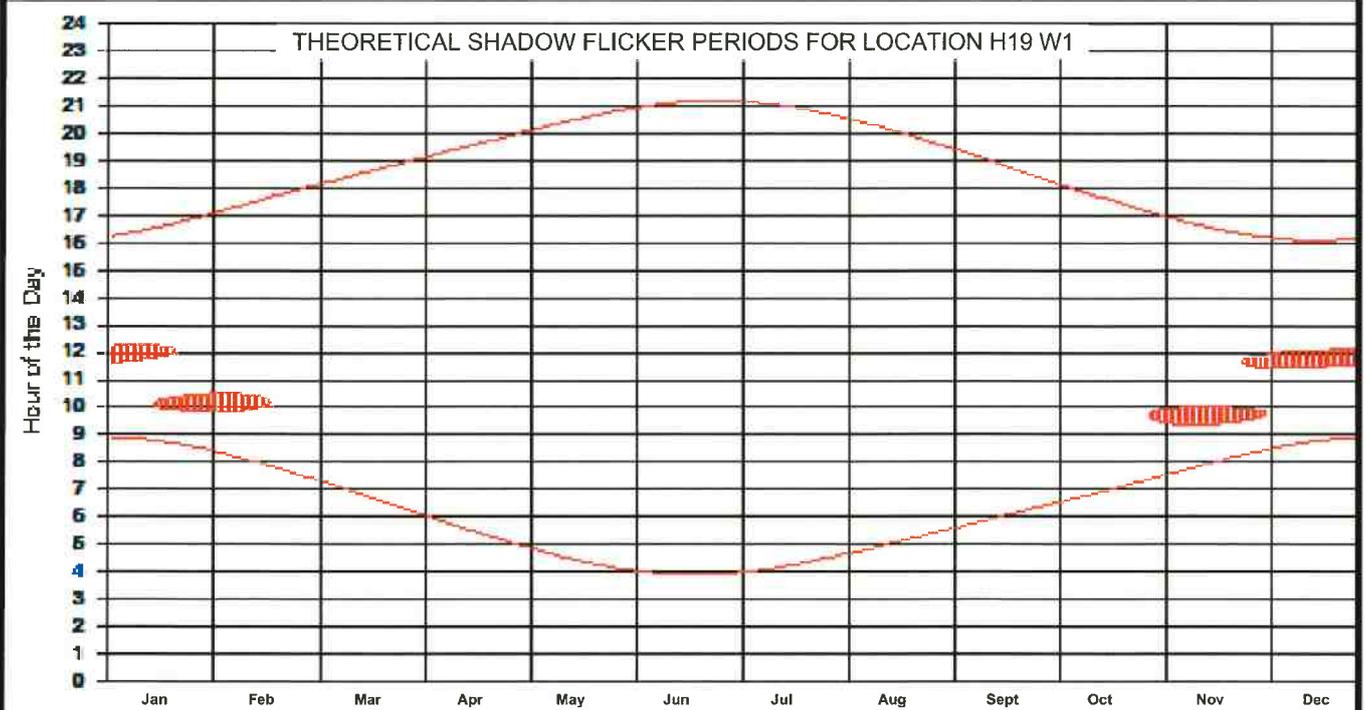
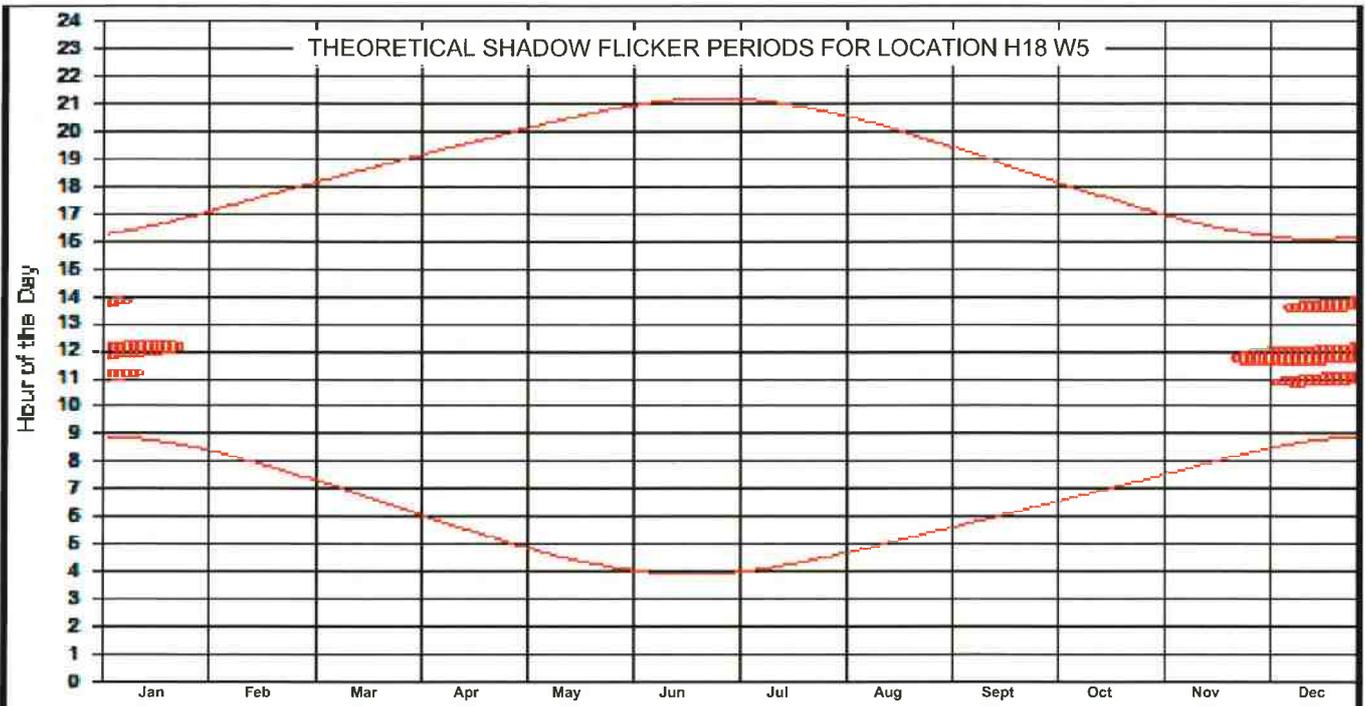




R1	FIRST ISSUE	AR	MC	MC	07/01/2018
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3g  
 Scale: NTS  
 Document Reference: 10733-004

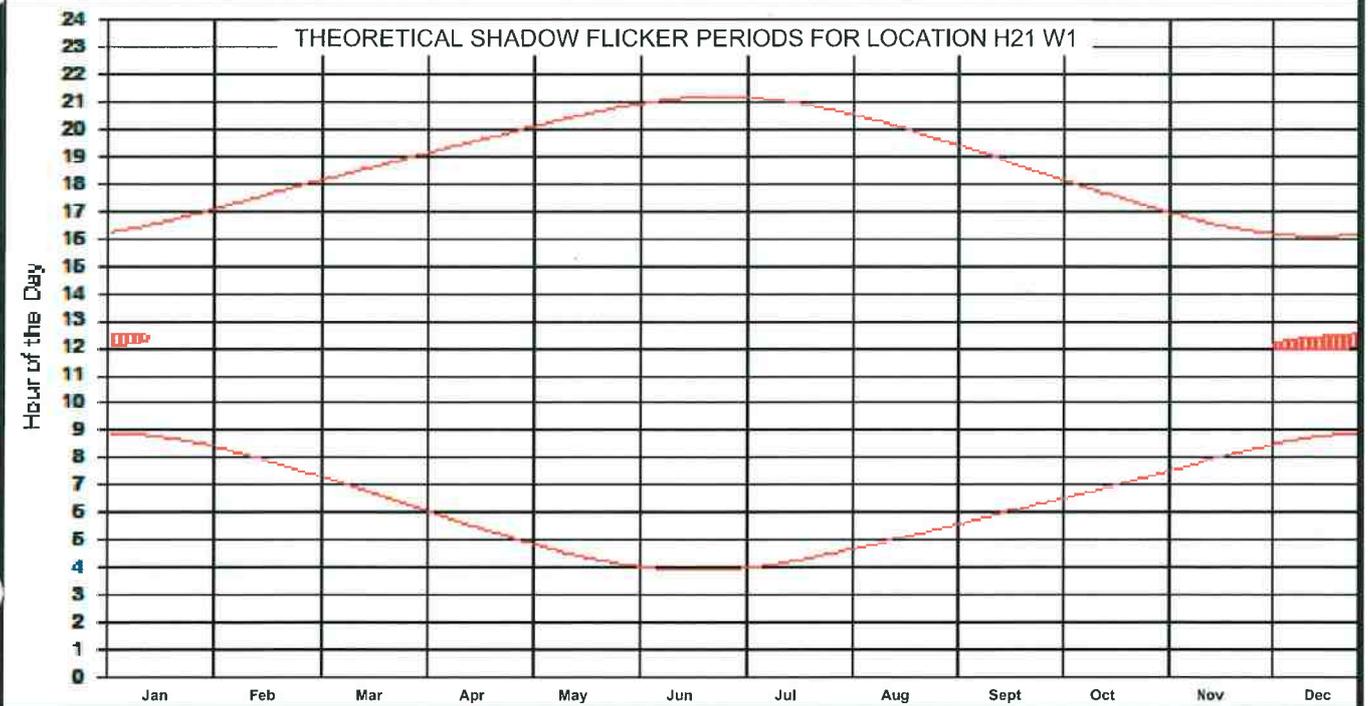
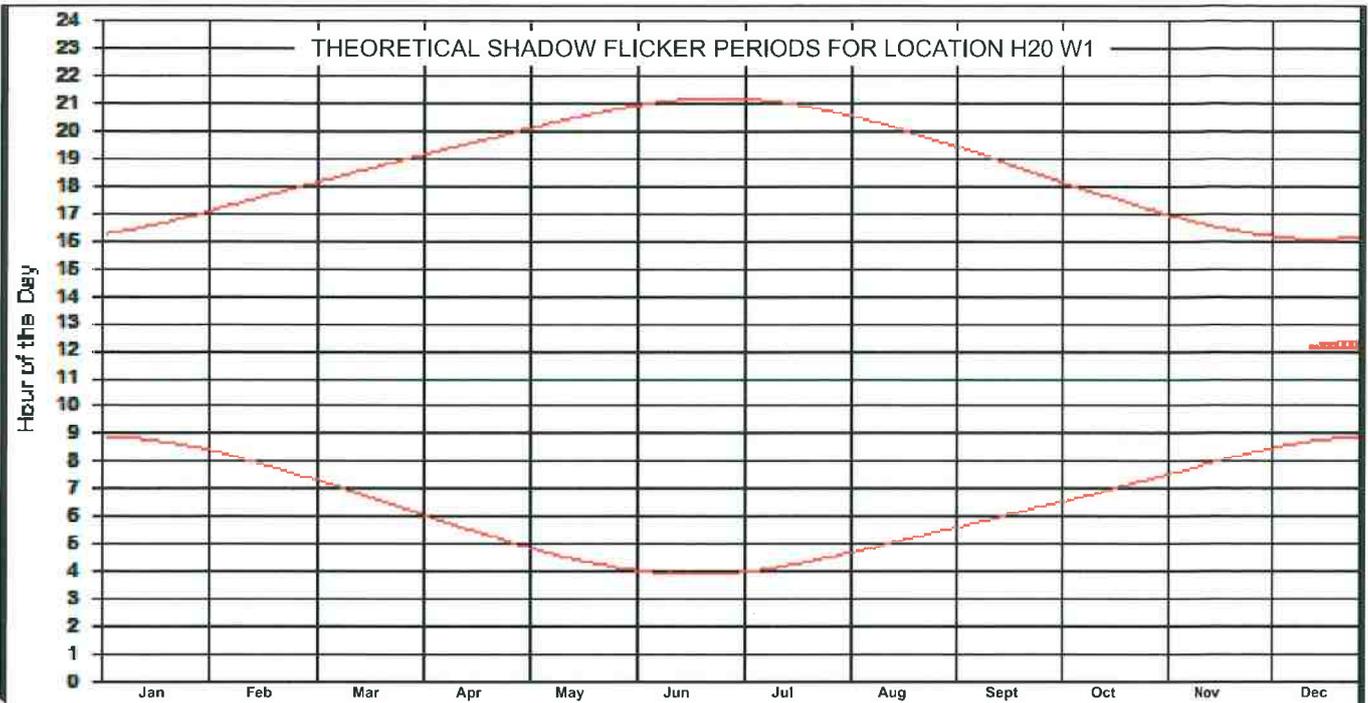


R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APPD	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3h  
 Scale: NTS  
 Document Reference: 10733-004

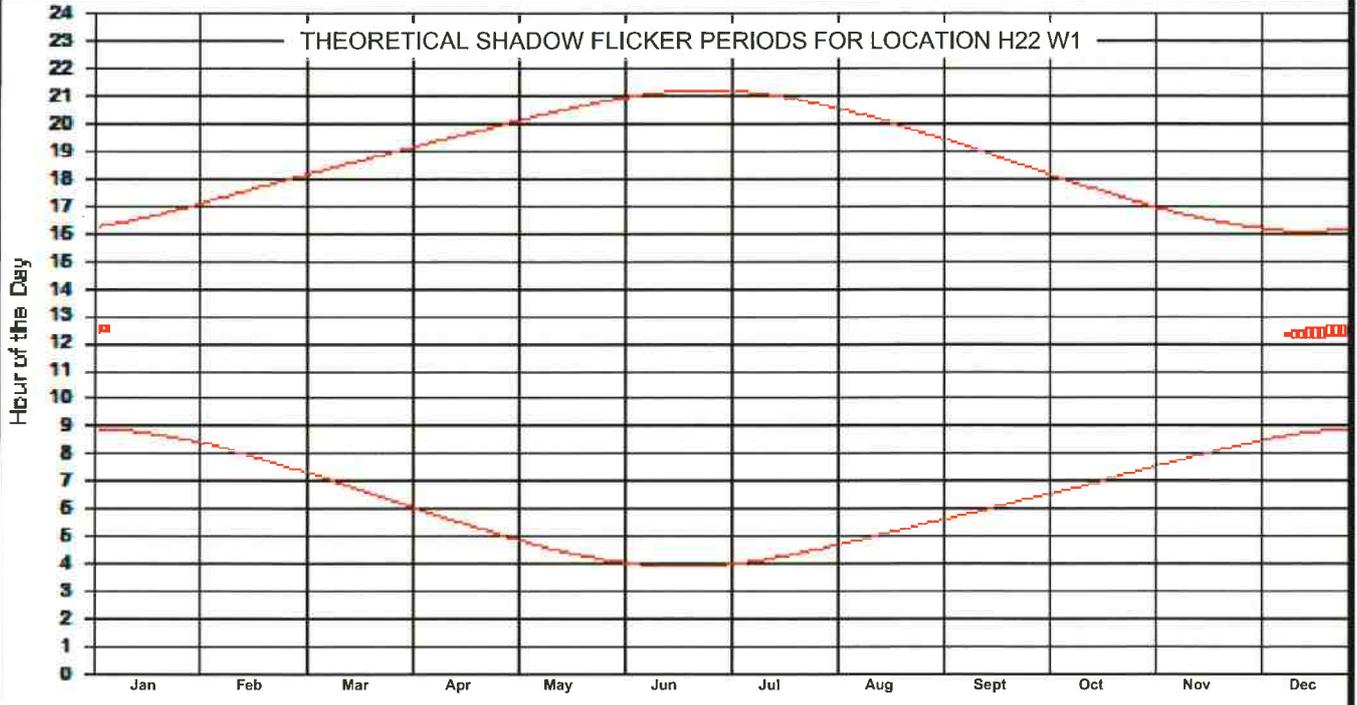


R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APP'D	Date

Project: Tievnameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effected Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3i  
 Scale: NTS  
 Document Reference: 10733-004



R1	FIRST ISSUE	AR	MC	MC	07/01/2016
REV.	DETAILS	DRAWN	CHKD	APP'D	Date

Project: Tievenameenta Wind Farm  
 Client: SSE  
 Title: Maximum Theoretical Shadow Flicker Occurance for Most Effectuated Window of Each Building at 10 Rotor Diameters  
 Figure Number: A1.3j  
 Scale: NTS  
 Document Reference: 10733-004




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## ANNEX 2 - Detailed Listings

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Project : TIEVENAMEENTA  
 Run  
 Name : KTIEVENAMEENTA004.WFK  
 Title : Layout 004 - SF with planning residences  
 Time : 29/02/2016 10:00

SHADOW TIMES ON EACH HOUSE

House Easting Northing  
 1 216189 375517

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
8	215590	375716	06-May	19:03:20	19:04:36	00:01:16	100
8	215590	375716	07-May	18:59:26	19:05:47	00:06:21	100
8	215590	375716	08-May	18:55:45	19:06:47	00:11:02	100
8	215590	375716	09-May	18:52:16	19:07:37	00:15:22	100
8	215590	375716	10-May	18:48:57	19:08:20	00:19:23	100
8	215590	375716	11-May	18:45:50	19:08:57	00:23:07	100
8	215590	375716	12-May	18:42:53	19:09:28	00:26:36	100
8	215590	375716	13-May	18:40:05	19:09:55	00:29:50	100
8	215590	375716	14-May	18:37:26	19:10:18	00:32:52	100
8	215590	375716	15-May	18:34:56	19:10:37	00:35:41	100
8	215590	375716	16-May	18:33:13	19:10:53	00:37:40	100
8	215590	375716	17-May	18:32:06	19:11:06	00:38:59	100
8	215590	375716	18-May	18:32:01	19:11:16	00:39:15	100
8	215590	375716	19-May	18:32:00	19:11:24	00:39:24	100
8	215590	375716	20-May	18:32:02	19:11:30	00:39:28	100
8	215590	375716	21-May	18:32:07	19:11:33	00:39:27	100
8	215590	375716	22-May	18:32:14	19:11:36	00:39:22	100
8	215590	375716	23-May	18:32:24	19:11:36	00:39:12	100
8	215590	375716	24-May	18:32:36	19:11:35	00:38:59	100
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8	215590	375716	02-Jun	18:35:35	19:11:03	00:35:28	100
8	215590	375716	03-Jun	18:36:01	19:10:57	00:34:56	100
8	215590	375716	04-Jun	18:36:27	19:10:52	00:34:24	100
8	215590	375716	05-Jun	18:36:54	19:10:46	00:33:52	100
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8	215590	375716	07-Jun	18:37:49	19:10:37	00:32:47	100
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8	215590	375716	09-Jun	18:38:44	19:10:29	00:31:46	100
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8	215590	375716	05-Jul	18:43:05	19:16:47	00:33:42	100
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9	215786	375387	13-Sep	16:15:43	17:08:14	00:52:31	100
9	215786	375387	14-Sep	16:15:16	17:07:58	00:52:42	100
9	215786	375387	15-Sep	16:14:53	17:07:36	00:52:42	100
9	215786	375387	16-Sep	16:14:36	17:07:08	00:52:32	100
9	215786	375387	17-Sep	16:14:25	17:06:35	00:52:09	100
9	215786	375387	18-Sep	16:14:20	17:05:55	00:51:35	100
9	215786	375387	19-Sep	16:14:21	17:05:10	00:50:49	100
9	215786	375387	20-Sep	16:14:28	17:04:18	00:49:50	100
9	215786	375387	21-Sep	16:14:42	17:03:20	00:48:38	100
9	215786	375387	22-Sep	16:15:04	17:02:14	00:47:10	100
9	215786	375387	23-Sep	16:15:33	17:01:00	00:45:27	100
9	215786	375387	24-Sep	16:16:12	16:59:38	00:43:25	100
9	215786	375387	25-Sep	16:17:02	16:58:05	00:41:03	100
9	215786	375387	26-Sep	16:18:04	16:56:19	00:38:15	100
9	215786	375387	27-Sep	16:19:21	16:54:18	00:34:56	100
9	215786	375387	28-Sep	16:20:59	16:51:58	00:30:59	100
9	215786	375387	29-Sep	16:23:07	16:49:11	00:26:03	100
9	215786	375387	30-Sep	16:26:11	16:45:29	00:19:19	74.18
9	215786	375387	01-Oct	16:33:20	16:37:54	00:04:34	1.56
10	215300	375312	20-Mar	17:17:26	17:41:18	00:23:52	100
10	215300	375312	21-Mar	17:17:01	17:40:18	00:23:16	100
10	215300	375312	22-Mar	17:17:32	17:39:18	00:21:46	100
10	215300	375312	23-Mar	17:18:34	17:37:48	00:19:14	100
10	215300	375312	24-Mar	17:20:10	17:35:50	00:15:40	100
10	215300	375312	25-Mar	17:22:27	17:32:58	00:10:31	53.83
10	215300	375312	16-Sep	17:12:14	17:20:53	00:08:39	35.57
10	215300	375312	17-Sep	17:08:54	17:23:29	00:14:34	100

10	215300	375312	18-Sep	17:06:32	17:24:56	00:18:23	100
10	215300	375312	19-Sep	17:04:44	17:25:51	00:21:07	100
10	215300	375312	20-Sep	17:03:30	17:26:27	00:22:57	100
10	215300	375312	21-Sep	17:03:11	17:26:39	00:23:28	100

House Easting Northing  
2 216660 376450

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
5	216152	376797	08-Jun	19:53:59	20:00:42	00:06:42	12.1
5	216152	376797	09-Jun	19:52:35	20:02:32	00:09:57	26.88
5	216152	376797	10-Jun	19:51:42	20:03:51	00:12:09	40.41
5	216152	376797	11-Jun	19:51:05	20:04:54	00:13:50	52.67
5	216152	376797	12-Jun	19:50:38	20:05:47	00:15:09	63.66
5	216152	376797	13-Jun	19:50:19	20:06:33	00:16:14	73.38
5	216152	376797	14-Jun	19:50:01	20:07:12	00:17:11	57.31
5	216152	376797	15-Jun	19:49:49	20:07:46	00:17:58	64.48
5	216152	376797	16-Jun	19:49:42	20:08:16	00:18:34	70.37
5	216152	376797	17-Jun	19:49:41	20:08:42	00:19:01	74.99
5	216152	376797	18-Jun	19:49:43	20:09:04	00:19:20	78.32
5	216152	376797	19-Jun	19:49:50	20:09:22	00:19:32	80.38
5	216152	376797	20-Jun	19:50:01	20:09:37	00:19:36	81.15
5	216152	376797	21-Jun	19:50:15	20:09:49	00:19:34	80.65
5	216152	376797	22-Jun	19:50:33	20:09:57	00:19:24	78.87
5	216152	376797	23-Jun	19:50:55	20:10:01	00:19:06	75.81
5	216152	376797	24-Jun	19:51:22	20:10:02	00:18:41	71.47
5	216152	376797	25-Jun	19:51:52	20:09:59	00:18:07	65.86
5	216152	376797	26-Jun	19:52:28	20:09:51	00:17:23	58.98
5	216152	376797	27-Jun	19:53:11	20:09:38	00:16:27	50.83
5	216152	376797	28-Jun	19:53:54	20:09:19	00:15:25	65.9
5	216152	376797	29-Jun	19:54:43	20:08:52	00:14:09	55.22
5	216152	376797	30-Jun	19:55:41	20:08:16	00:12:34	43.29
5	216152	376797	01-Jul	19:56:54	20:07:25	00:10:31	30.1
5	216152	376797	02-Jul	19:58:31	20:06:08	00:07:37	15.67
6	216007	376491	02-Apr	18:15:24	18:22:15	00:06:51	16.26
6	216007	376491	03-Apr	18:10:02	18:26:20	00:16:18	74.06
6	216007	376491	04-Apr	18:07:05	18:28:30	00:21:25	100
6	216007	376491	05-Apr	18:04:55	18:30:25	00:25:30	100
6	216007	376491	06-Apr	18:03:12	18:32:25	00:29:13	100
6	216007	376491	07-Apr	18:01:47	18:33:51	00:32:04	100
6	216007	376491	08-Apr	18:00:36	18:34:54	00:34:17	100
6	216007	376491	09-Apr	17:59:37	18:35:42	00:36:04	100
6	216007	376491	10-Apr	17:58:48	18:36:17	00:37:29	100

6	216007	376491	11-Apr	17:58:09	18:36:42	00:38:33	100
6	216007	376491	12-Apr	17:57:38	18:36:57	00:39:19	100
6	216007	376491	13-Apr	17:57:15	18:37:04	00:39:49	100
6	216007	376491	14-Apr	17:56:58	18:37:03	00:40:05	100
6	216007	376491	15-Apr	17:56:47	18:36:55	00:40:08	100
6	216007	376491	16-Apr	17:56:44	18:36:40	00:39:56	100
6	216007	376491	17-Apr	17:56:49	18:36:19	00:39:30	100
6	216007	376491	18-Apr	17:57:02	18:35:50	00:38:49	100
6	216007	376491	19-Apr	17:57:23	18:35:15	00:37:52	100
6	216007	376491	20-Apr	17:57:53	18:34:32	00:36:39	100
6	216007	376491	21-Apr	17:58:34	18:33:41	00:35:07	100
6	216007	376491	22-Apr	17:59:26	18:32:42	00:33:15	100
6	216007	376491	23-Apr	18:00:35	18:31:35	00:31:01	100
6	216007	376491	24-Apr	18:01:51	18:30:24	00:28:33	100
6	216007	376491	25-Apr	18:03:26	18:29:03	00:25:37	100
6	216007	376491	26-Apr	18:05:11	18:27:25	00:22:14	100
6	216007	376491	27-Apr	18:07:18	18:25:24	00:18:06	76.1
6	216007	376491	28-Apr	18:09:46	18:22:40	00:12:54	55.78
6	216007	376491	12-Aug	18:20:11	18:27:19	00:07:08	16.49
6	216007	376491	13-Aug	18:16:13	18:30:57	00:14:43	73.12
6	216007	376491	14-Aug	18:13:35	18:33:02	00:19:27	92.71
6	216007	376491	15-Aug	18:11:20	18:34:32	00:23:12	100
6	216007	376491	16-Aug	18:09:16	18:35:41	00:26:25	100
6	216007	376491	17-Aug	18:07:22	18:36:35	00:29:13	100
6	216007	376491	18-Aug	18:05:44	18:37:19	00:31:35	100
6	216007	376491	19-Aug	18:04:15	18:37:58	00:33:43	100
6	216007	376491	20-Aug	18:02:59	18:38:29	00:35:29	100
6	216007	376491	21-Aug	18:01:55	18:38:50	00:36:55	100
6	216007	376491	22-Aug	18:00:59	18:39:03	00:38:04	100
6	216007	376491	23-Aug	18:00:10	18:39:08	00:38:57	100
6	216007	376491	24-Aug	17:59:30	18:39:05	00:39:35	100
6	216007	376491	25-Aug	17:58:56	18:38:55	00:39:59	100
6	216007	376491	26-Aug	17:58:29	18:38:38	00:40:09	100
6	216007	376491	27-Aug	17:58:08	18:38:13	00:40:05	100
6	216007	376491	28-Aug	17:57:53	18:37:40	00:39:47	100
6	216007	376491	29-Aug	17:57:43	18:36:59	00:39:16	100
6	216007	376491	30-Aug	17:57:41	18:36:10	00:38:29	100
6	216007	376491	31-Aug	17:57:46	18:35:10	00:37:24	100
6	216007	376491	01-Sep	17:57:59	18:33:59	00:36:00	100
6	216007	376491	02-Sep	17:58:22	18:32:36	00:34:14	100
6	216007	376491	03-Sep	17:58:56	18:30:58	00:32:01	100
6	216007	376491	04-Sep	17:59:44	18:28:57	00:29:13	100
6	216007	376491	05-Sep	18:00:49	18:26:22	00:25:33	100
6	216007	376491	06-Sep	18:02:19	18:23:52	00:21:33	100
6	216007	376491	07-Sep	18:04:32	18:21:08	00:16:35	76.84
6	216007	376491	08-Sep	18:08:59	18:16:42	00:07:42	20.42

7	215848	376158	27-Feb	17:14:15	17:17:38	00:03:23	5.06
7	215848	376158	28-Feb	17:08:57	17:22:09	00:13:13	63.84
7	215848	376158	29-Feb	17:06:20	17:24:17	00:17:57	100
7	215848	376158	01-Mar	17:04:31	17:26:24	00:21:53	100
7	215848	376158	02-Mar	17:03:07	17:28:06	00:24:59	100
7	215848	376158	03-Mar	17:02:02	17:29:15	00:27:13	100
7	215848	376158	04-Mar	17:01:11	17:30:01	00:28:51	100
7	215848	376158	05-Mar	17:00:32	17:30:31	00:29:59	100
7	215848	376158	06-Mar	17:00:04	17:30:47	00:30:43	100
7	215848	376158	07-Mar	16:59:45	17:30:51	00:31:06	100
7	215848	376158	08-Mar	16:59:36	17:30:43	00:31:07	100
7	215848	376158	09-Mar	16:59:38	17:30:23	00:30:45	100
7	215848	376158	10-Mar	16:59:52	17:29:51	00:29:59	100
7	215848	376158	11-Mar	17:00:20	17:29:07	00:28:47	100
7	215848	376158	12-Mar	17:01:04	17:28:09	00:27:05	100
7	215848	376158	13-Mar	17:02:10	17:26:58	00:24:49	100
7	215848	376158	14-Mar	17:03:35	17:25:35	00:22:00	100
7	215848	376158	15-Mar	17:05:26	17:23:49	00:18:23	100
7	215848	376158	16-Mar	17:07:40	17:21:23	00:13:43	82.62
7	215848	376158	17-Mar	17:11:46	17:16:58	00:05:12	12.16
7	215848	376158	25-Sep	16:51:55	17:03:10	00:11:15	52.34
7	215848	376158	26-Sep	16:48:49	17:05:24	00:16:35	84.98
7	215848	376158	27-Sep	16:46:12	17:06:45	00:20:33	100
7	215848	376158	28-Sep	16:43:59	17:07:38	00:23:39	100
7	215848	376158	29-Sep	16:42:10	17:08:17	00:26:06	100
7	215848	376158	30-Sep	16:40:42	17:08:45	00:28:03	100
7	215848	376158	01-Oct	16:39:32	17:08:59	00:29:27	100
7	215848	376158	02-Oct	16:38:38	17:09:03	00:30:25	100
7	215848	376158	03-Oct	16:37:56	17:08:54	00:30:59	100
7	215848	376158	04-Oct	16:37:25	17:08:35	00:31:10	100
7	215848	376158	05-Oct	16:37:06	17:08:06	00:30:59	100
7	215848	376158	06-Oct	16:36:57	17:07:25	00:30:28	100
7	215848	376158	07-Oct	16:36:58	17:06:33	00:29:35	100
7	215848	376158	08-Oct	16:37:11	17:05:27	00:28:16	100
7	215848	376158	09-Oct	16:37:37	17:04:04	00:26:27	100
7	215848	376158	10-Oct	16:38:19	17:02:18	00:23:58	100
7	215848	376158	11-Oct	16:39:22	16:59:52	00:20:30	100
7	215848	376158	12-Oct	16:40:56	16:57:28	00:16:32	100
7	215848	376158	13-Oct	16:43:32	16:54:39	00:11:06	40.76

House Easting Northing  
3 216834 377194

Turbine Easting Northing Date Start Time End Time Duration % Cover

2	216143	377705	13-Jun	20:29:28	20:30:16	00:00:48	100
2	216143	377705	14-Jun	20:29:12	20:31:15	00:02:02	100
2	216143	377705	14-Jun	20:31:17	20:31:25	00:00:08	100
2	216143	377705	15-Jun	20:29:01	20:31:52	00:02:51	100
2	216143	377705	16-Jun	20:28:55	20:32:10	00:03:15	100
2	216143	377705	17-Jun	20:28:52	20:32:26	00:03:34	100
2	216143	377705	18-Jun	20:28:54	20:32:41	00:03:47	100
2	216143	377705	19-Jun	20:29:01	20:32:56	00:03:55	100
2	216143	377705	20-Jun	20:29:11	20:33:09	00:03:58	100
2	216143	377705	21-Jun	20:29:26	20:33:22	00:03:56	100
2	216143	377705	22-Jun	20:29:44	20:33:34	00:03:49	100
2	216143	377705	23-Jun	20:30:07	20:33:44	00:03:37	100
2	216143	377705	24-Jun	20:30:34	20:33:54	00:03:19	100
2	216143	377705	25-Jun	20:31:05	20:34:02	00:02:56	100
2	216143	377705	26-Jun	20:31:41	20:33:59	00:02:19	100
2	216143	377705	27-Jun	20:32:20	20:33:26	00:01:05	100

3	216382	377409	14-May	19:14:39	19:16:51	00:02:11	1.13
3	216382	377409	15-May	19:09:01	19:22:36	00:13:35	44.61
3	216382	377409	16-May	19:06:28	19:25:16	00:18:48	87.06
3	216382	377409	17-May	19:04:37	19:27:15	00:22:38	100
3	216382	377409	18-May	19:03:09	19:29:10	00:26:01	100
3	216382	377409	19-May	19:01:57	19:30:54	00:28:57	100
3	216382	377409	20-May	19:00:56	19:32:23	00:31:27	100
3	216382	377409	21-May	19:00:04	19:33:41	00:33:37	100
3	216382	377409	22-May	18:59:20	19:34:49	00:35:29	100
3	216382	377409	23-May	18:58:42	19:35:50	00:37:08	100
3	216382	377409	24-May	18:58:09	19:36:45	00:38:36	100
3	216382	377409	25-May	18:57:41	19:37:35	00:39:54	100
3	216382	377409	26-May	18:57:17	19:38:21	00:41:03	100
3	216382	377409	27-May	18:56:57	19:39:03	00:42:05	100
3	216382	377409	28-May	18:56:40	19:39:41	00:43:01	100
3	216382	377409	29-May	18:56:27	19:40:18	00:43:51	100
3	216382	377409	30-May	18:56:16	19:40:51	00:44:35	100
3	216382	377409	31-May	18:56:08	19:41:23	00:45:15	100
3	216382	377409	01-Jun	18:56:01	19:41:52	00:45:51	100
3	216382	377409	02-Jun	18:55:57	19:42:20	00:46:23	100
3	216382	377409	03-Jun	18:55:55	19:42:47	00:46:51	100
3	216382	377409	04-Jun	18:55:55	19:43:12	00:47:16	100
3	216382	377409	05-Jun	18:55:56	19:43:35	00:47:39	100
3	216382	377409	06-Jun	18:55:59	19:43:11	00:47:12	100
3	216382	377409	07-Jun	18:56:03	19:40:23	00:44:20	100
3	216382	377409	08-Jun	18:56:08	19:40:44	00:44:35	100
3	216382	377409	09-Jun	18:56:15	19:41:03	00:44:49	100
3	216382	377409	10-Jun	18:56:22	19:41:22	00:45:01	100

3	216382	377409	11-Jun	18:56:30	19:41:41	00:45:11	100
3	216382	377409	12-Jun	18:56:39	19:41:58	00:45:19	100
3	216382	377409	13-Jun	18:56:48	19:42:15	00:45:27	100
3	216382	377409	14-Jun	18:56:59	19:42:32	00:45:33	100
3	216382	377409	15-Jun	18:57:09	19:42:47	00:45:38	100
3	216382	377409	16-Jun	18:57:21	19:43:03	00:45:42	100
3	216382	377409	17-Jun	18:57:32	19:43:18	00:45:45	100
3	216382	377409	18-Jun	18:57:44	19:43:32	00:45:48	100
3	216382	377409	19-Jun	18:57:57	19:43:46	00:45:49	100
3	216382	377409	20-Jun	18:58:09	19:43:59	00:45:50	100
3	216382	377409	21-Jun	18:58:22	19:44:12	00:45:49	100
3	216382	377409	22-Jun	18:58:36	19:44:24	00:45:48	100
3	216382	377409	23-Jun	18:58:49	19:44:36	00:45:46	100
3	216382	377409	24-Jun	18:59:03	19:44:47	00:45:43	100
3	216382	377409	25-Jun	18:59:17	19:44:57	00:45:39	100
3	216382	377409	26-Jun	18:59:32	19:45:06	00:45:35	100
3	216382	377409	27-Jun	18:59:47	19:45:15	00:45:29	100
3	216382	377409	28-Jun	19:00:02	19:45:23	00:45:22	100
3	216382	377409	29-Jun	19:00:17	19:45:30	00:45:13	100
3	216382	377409	30-Jun	19:00:33	19:45:36	00:45:04	100
3	216382	377409	01-Jul	19:00:49	19:45:41	00:44:52	100
3	216382	377409	02-Jul	19:01:06	19:45:45	00:44:39	100
3	216382	377409	03-Jul	19:01:23	19:45:47	00:44:25	100
3	216382	377409	04-Jul	19:01:40	19:45:48	00:44:08	100
3	216382	377409	05-Jul	19:01:59	19:49:44	00:47:45	100
3	216382	377409	06-Jul	19:02:18	19:49:41	00:47:24	100
3	216382	377409	07-Jul	19:02:38	19:49:37	00:46:59	100
3	216382	377409	08-Jul	19:02:59	19:49:31	00:46:32	100
3	216382	377409	09-Jul	19:03:21	19:49:22	00:46:01	100
3	216382	377409	10-Jul	19:03:44	19:49:11	00:45:27	100
3	216382	377409	11-Jul	19:04:08	19:48:57	00:44:49	100
3	216382	377409	12-Jul	19:04:34	19:48:40	00:44:06	100
3	216382	377409	13-Jul	19:05:01	19:48:20	00:43:18	100
3	216382	377409	14-Jul	19:05:31	19:47:56	00:42:25	100
3	216382	377409	15-Jul	19:06:03	19:47:28	00:41:26	100
3	216382	377409	16-Jul	19:06:37	19:46:56	00:40:19	100
3	216382	377409	17-Jul	19:07:14	19:46:19	00:39:05	100
3	216382	377409	18-Jul	19:07:55	19:45:37	00:37:42	100
3	216382	377409	19-Jul	19:08:39	19:44:47	00:36:08	100
3	216382	377409	20-Jul	19:09:29	19:43:50	00:34:21	100
3	216382	377409	21-Jul	19:10:24	19:42:44	00:32:20	100
3	216382	377409	22-Jul	19:11:26	19:41:25	00:29:59	100
3	216382	377409	23-Jul	19:12:37	19:39:54	00:27:16	100
3	216382	377409	24-Jul	19:14:01	19:38:06	00:24:05	100
3	216382	377409	25-Jul	19:15:42	19:36:15	00:20:33	100
3	216382	377409	26-Jul	19:17:53	19:33:59	00:16:06	62.8

3	216382	377409	27-Jul	19:21:15	19:30:30	00:09:14	20.32
4	216129	377270	10-Apr	18:33:08	18:36:26	00:03:17	100
4	216129	377270	11-Apr	18:22:45	18:38:14	00:15:29	100
4	216129	377270	12-Apr	18:13:17	18:39:06	00:25:49	100
4	216129	377270	13-Apr	18:08:22	18:39:43	00:31:21	100
4	216129	377270	14-Apr	18:07:36	18:40:09	00:32:34	100
4	216129	377270	15-Apr	18:06:59	18:40:26	00:33:27	100
4	216129	377270	16-Apr	18:06:31	18:40:34	00:34:03	100
4	216129	377270	17-Apr	18:06:11	18:40:33	00:34:22	100
4	216129	377270	18-Apr	18:05:56	18:40:26	00:34:30	100
4	216129	377270	19-Apr	18:05:49	18:40:11	00:34:23	100
4	216129	377270	20-Apr	18:05:49	18:39:50	00:34:01	100
4	216129	377270	21-Apr	18:05:57	18:39:21	00:33:24	100
4	216129	377270	22-Apr	18:06:14	18:38:46	00:32:32	100
4	216129	377270	23-Apr	18:06:39	18:38:03	00:31:24	100
4	216129	377270	24-Apr	18:07:14	18:37:11	00:29:57	100
4	216129	377270	25-Apr	18:08:00	18:36:10	00:28:10	100
4	216129	377270	26-Apr	18:08:59	18:35:02	00:26:02	100
4	216129	377270	27-Apr	18:10:18	18:33:42	00:23:24	100
4	216129	377270	28-Apr	18:12:02	18:32:05	00:20:03	98.79
4	216129	377270	29-Apr	18:13:52	18:30:02	00:16:10	96.61
4	216129	377270	30-Apr	18:16:30	18:27:07	00:10:37	39.94
4	216129	377270	10-Aug	18:28:20	18:31:34	00:03:13	3.56
4	216129	377270	11-Aug	18:23:23	18:36:13	00:12:50	58.72
4	216129	377270	12-Aug	18:20:52	18:38:24	00:17:32	100
4	216129	377270	13-Aug	18:18:45	18:39:56	00:21:12	100
4	216129	377270	14-Aug	18:16:51	18:41:06	00:24:15	100
4	216129	377270	15-Aug	18:15:18	18:41:59	00:26:41	100
4	216129	377270	16-Aug	18:14:01	18:42:43	00:28:42	100
4	216129	377270	17-Aug	18:12:55	18:43:17	00:30:22	100
4	216129	377270	18-Aug	18:11:58	18:43:41	00:31:43	100
4	216129	377270	19-Aug	18:11:10	18:43:57	00:32:46	100
4	216129	377270	20-Aug	18:10:30	18:44:04	00:33:34	100
4	216129	377270	21-Aug	18:09:56	18:44:03	00:34:07	100
4	216129	377270	22-Aug	18:09:29	18:43:55	00:34:26	100
4	216129	377270	23-Aug	18:09:09	18:43:39	00:34:30	100
4	216129	377270	24-Aug	18:08:55	18:43:16	00:34:21	100
4	216129	377270	25-Aug	18:08:45	18:42:44	00:33:59	100
4	216129	377270	26-Aug	18:08:43	18:42:04	00:33:21	100
4	216129	377270	27-Aug	18:08:49	18:41:15	00:32:26	100
4	216129	377270	28-Aug	18:09:03	18:40:15	00:31:12	100
4	216129	377270	29-Aug	18:14:14	18:39:04	00:24:50	100
4	216129	377270	30-Aug	18:23:02	18:37:38	00:14:36	100
4	216129	377270	31-Aug	18:32:41	18:35:16	00:02:34	100

5	216152	376797	15-Feb	16:32:20	16:37:09	00:04:50	66.05
5	216152	376797	16-Feb	16:29:55	16:44:30	00:14:34	100
5	216152	376797	17-Feb	16:28:12	16:49:28	00:21:16	100
5	216152	376797	18-Feb	16:26:53	16:51:01	00:24:08	100
5	216152	376797	19-Feb	16:25:49	16:52:13	00:26:24	100
5	216152	376797	20-Feb	16:24:58	16:53:07	00:28:09	100
5	216152	376797	21-Feb	16:24:18	16:53:47	00:29:29	100
5	216152	376797	22-Feb	16:23:47	16:54:14	00:30:26	100
5	216152	376797	23-Feb	16:23:26	16:54:30	00:31:04	100
5	216152	376797	24-Feb	16:23:12	16:54:35	00:31:24	100
5	216152	376797	25-Feb	16:23:04	16:54:31	00:31:27	100
5	216152	376797	26-Feb	16:23:05	16:54:17	00:31:12	100
5	216152	376797	27-Feb	16:23:16	16:53:52	00:30:37	100
5	216152	376797	28-Feb	16:23:37	16:53:17	00:29:41	100
5	216152	376797	29-Feb	16:24:09	16:52:30	00:28:21	100
5	216152	376797	01-Mar	16:24:56	16:51:30	00:26:34	100
5	216152	376797	02-Mar	16:26:01	16:50:16	00:24:15	100
5	216152	376797	03-Mar	16:27:32	16:48:42	00:21:09	100
5	216152	376797	04-Mar	16:29:32	16:46:38	00:17:06	100
5	216152	376797	05-Mar	16:32:25	16:43:36	00:11:11	53.16
5	216152	376797	06-Oct	16:12:27	16:16:48	00:04:22	7.76
5	216152	376797	07-Oct	16:07:23	16:21:08	00:13:46	65.67
5	216152	376797	08-Oct	16:04:35	16:23:11	00:18:36	100
5	216152	376797	09-Oct	16:02:13	16:24:32	00:22:18	100
5	216152	376797	10-Oct	16:00:25	16:25:29	00:25:04	100
5	216152	376797	11-Oct	15:58:59	16:26:10	00:27:10	100
5	216152	376797	12-Oct	15:57:51	16:26:39	00:28:47	100
5	216152	376797	13-Oct	15:56:57	16:26:56	00:29:59	100
5	216152	376797	14-Oct	15:56:15	16:27:03	00:30:48	100
5	216152	376797	15-Oct	15:55:43	16:27:01	00:31:18	100
5	216152	376797	16-Oct	15:55:22	16:26:51	00:31:29	100
5	216152	376797	17-Oct	15:55:10	16:26:31	00:31:21	100
5	216152	376797	18-Oct	15:55:05	16:26:04	00:30:59	100
5	216152	376797	19-Oct	15:55:09	16:25:27	00:30:18	100
5	216152	376797	20-Oct	15:55:24	16:24:41	00:29:17	100
5	216152	376797	21-Oct	15:55:49	16:23:43	00:27:54	100
5	216152	376797	22-Oct	15:56:26	16:22:32	00:26:06	100
5	216152	376797	23-Oct	15:57:17	16:21:04	00:23:47	100
5	216152	376797	24-Oct	15:58:26	16:19:17	00:20:51	100
5	216152	376797	25-Oct	16:00:01	16:13:33	00:13:32	100
5	216152	376797	26-Oct	16:02:21	16:06:14	00:03:53	59.49

House	Easting	Northing
4	216781	377805

Turbine	Easting	Northing	Date	Start	End	Duration	% Cover
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				Time	Time		
2	216143	377705	25-Mar	17:26:29	18:01:10	00:34:40	100
2	216143	377705	26-Mar	17:26:41	18:02:46	00:36:05	100
2	216143	377705	27-Mar	17:27:02	18:02:00	00:34:58	100
2	216143	377705	28-Mar	17:27:36	18:01:05	00:33:29	100
2	216143	377705	29-Mar	17:27:46	17:59:58	00:32:12	100
2	216143	377705	30-Mar	17:28:40	17:58:39	00:29:59	100
2	216143	377705	31-Mar	17:29:53	17:57:08	00:27:15	100
2	216143	377705	01-Apr	17:31:35	17:55:18	00:23:43	100
2	216143	377705	02-Apr	17:33:59	17:52:58	00:18:59	100
2	216143	377705	03-Apr	17:36:37	17:49:45	00:13:07	60.25
2	216143	377705	07-Sep	17:31:40	17:44:09	00:12:29	53.88
2	216143	377705	08-Sep	17:28:19	17:46:50	00:18:31	100
2	216143	377705	09-Sep	17:25:18	17:48:32	00:23:14	100
2	216143	377705	10-Sep	17:22:55	17:49:45	00:26:51	100
2	216143	377705	11-Sep	17:21:00	17:50:38	00:29:38	100
2	216143	377705	12-Sep	17:19:25	17:51:19	00:31:53	100
2	216143	377705	13-Sep	17:18:36	17:51:47	00:33:11	100
2	216143	377705	14-Sep	17:17:21	17:52:04	00:34:43	100
2	216143	377705	15-Sep	17:16:18	17:52:11	00:35:53	100
2	216143	377705	16-Sep	17:15:25	17:52:10	00:36:45	100
2	216143	377705	17-Sep	17:43:12	17:49:33	00:06:22	100
3	216382	377409	31-Jan	15:27:30	15:31:21	00:03:51	100
3	216382	377409	01-Feb	15:26:26	15:36:48	00:10:22	100
3	216382	377409	02-Feb	15:25:32	15:42:31	00:16:59	100
3	216382	377409	03-Feb	15:24:45	15:48:32	00:23:46	100
3	216382	377409	04-Feb	15:24:05	15:54:51	00:30:46	100
3	216382	377409	05-Feb	15:23:31	16:00:11	00:36:41	100
3	216382	377409	06-Feb	15:23:02	16:01:03	00:38:01	100
3	216382	377409	07-Feb	15:22:38	16:03:37	00:40:59	100
3	216382	377409	08-Feb	15:22:18	16:04:12	00:41:53	100
3	216382	377409	09-Feb	15:22:04	16:04:40	00:42:36	100
3	216382	377409	10-Feb	15:21:53	16:05:01	00:43:08	100
3	216382	377409	11-Feb	15:21:48	16:05:17	00:43:29	100
3	216382	377409	12-Feb	15:21:47	16:05:25	00:43:38	100
3	216382	377409	13-Feb	15:21:48	16:05:28	00:43:39	100
3	216382	377409	14-Feb	15:21:53	16:05:23	00:43:30	100
3	216382	377409	15-Feb	15:22:03	16:05:13	00:43:10	100
3	216382	377409	16-Feb	15:22:18	16:04:55	00:42:37	100
3	216382	377409	17-Feb	15:22:40	16:04:30	00:41:51	100
3	216382	377409	18-Feb	15:23:07	16:03:57	00:40:50	100
3	216382	377409	19-Feb	15:23:42	16:03:17	00:39:34	100
3	216382	377409	20-Feb	15:24:26	16:02:28	00:38:02	100
3	216382	377409	21-Feb	15:25:19	16:01:31	00:36:12	100

3	216382	377409	22-Feb	15:26:25	16:00:23	00:33:58	100
3	216382	377409	23-Feb	15:27:46	15:59:01	00:31:15	100
3	216382	377409	24-Feb	15:29:30	15:57:22	00:27:52	100
3	216382	377409	25-Feb	15:31:52	15:55:20	00:23:28	98.28
3	216382	377409	26-Feb	15:34:26	15:52:40	00:18:14	99.51
3	216382	377409	27-Feb	15:38:19	15:48:31	00:10:12	28.52
3	216382	377409	14-Oct	15:10:26	15:22:38	00:12:12	41.61
3	216382	377409	15-Oct	15:06:40	15:25:54	00:19:14	100
3	216382	377409	16-Oct	15:03:46	15:28:02	00:24:16	100
3	216382	377409	17-Oct	15:01:13	15:29:37	00:28:24	100
3	216382	377409	18-Oct	14:59:14	15:30:52	00:31:38	100
3	216382	377409	19-Oct	14:57:36	15:31:52	00:34:15	100
3	216382	377409	20-Oct	14:56:16	15:32:40	00:36:24	100
3	216382	377409	21-Oct	14:55:08	15:33:19	00:38:11	100
3	216382	377409	22-Oct	14:54:10	15:33:52	00:39:41	100
3	216382	377409	23-Oct	14:53:23	15:34:18	00:40:55	100
3	216382	377409	24-Oct	14:52:44	15:34:37	00:41:54	100
3	216382	377409	25-Oct	14:52:12	15:34:51	00:42:39	100
3	216382	377409	26-Oct	14:51:48	15:34:59	00:43:11	100
3	216382	377409	27-Oct	14:51:31	15:35:02	00:43:31	100
3	216382	377409	28-Oct	14:51:20	15:34:59	00:43:40	100
3	216382	377409	29-Oct	14:51:14	15:34:53	00:43:39	100
3	216382	377409	30-Oct	14:51:11	15:34:41	00:43:30	100
3	216382	377409	31-Oct	14:51:15	15:34:24	00:43:09	100
3	216382	377409	01-Nov	14:51:25	15:34:03	00:42:38	100
3	216382	377409	02-Nov	14:51:41	15:33:37	00:41:57	100
3	216382	377409	03-Nov	14:52:03	15:33:06	00:41:04	100
3	216382	377409	04-Nov	14:52:31	15:30:38	00:38:07	100
3	216382	377409	05-Nov	14:53:05	15:29:55	00:36:50	100
3	216382	377409	06-Nov	14:53:47	15:25:16	00:31:29	100
3	216382	377409	07-Nov	14:54:35	15:19:10	00:24:35	100
3	216382	377409	08-Nov	14:55:31	15:13:24	00:17:53	100
3	216382	377409	09-Nov	14:56:37	15:07:57	00:11:20	100
3	216382	377409	10-Nov	14:57:53	15:02:47	00:04:54	100
4	216129	377270	09-Feb	15:53:39	15:53:50	00:00:12	100
4	216129	377270	10-Feb	15:53:38	16:00:22	00:06:44	100
4	216129	377270	11-Feb	15:53:45	16:07:12	00:13:27	100
4	216129	377270	12-Feb	15:53:59	16:14:27	00:20:28	100
4	216129	377270	13-Feb	15:54:10	16:21:20	00:27:10	100
4	216129	377270	14-Feb	15:54:36	16:22:02	00:27:25	100
4	216129	377270	15-Feb	15:55:12	16:22:34	00:27:22	100
4	216129	377270	16-Feb	15:55:59	16:21:45	00:25:45	100
4	216129	377270	17-Feb	15:57:03	16:20:47	00:23:44	100
4	216129	377270	18-Feb	15:58:27	16:19:29	00:21:02	100
4	216129	377270	19-Feb	16:00:28	16:17:46	00:17:18	82.25

4	216129	377270	20-Feb	16:03:08	16:15:17	00:12:09	62.74
4	216129	377270	20-Oct	15:38:17	15:42:06	00:03:49	6.14
4	216129	377270	21-Oct	15:33:33	15:46:27	00:12:54	70.95
4	216129	377270	22-Oct	15:30:43	15:48:31	00:17:48	89.22
4	216129	377270	23-Oct	15:28:35	15:49:56	00:21:21	100
4	216129	377270	24-Oct	15:27:02	15:50:59	00:23:56	100
4	216129	377270	25-Oct	15:25:51	15:51:45	00:25:54	100
4	216129	377270	26-Oct	15:24:55	15:52:23	00:27:27	100
4	216129	377270	27-Oct	15:24:13	15:51:15	00:27:02	100
4	216129	377270	28-Oct	15:23:41	15:50:54	00:27:13	100
4	216129	377270	29-Oct	15:23:26	15:43:44	00:20:19	100
4	216129	377270	30-Oct	15:23:09	15:36:34	00:13:26	100
4	216129	377270	31-Oct	15:23:01	15:29:50	00:06:49	100
4	216129	377270	01-Nov	15:23:01	15:23:24	00:00:23	100
4	216129	377270	01-Nov	15:23:27	15:23:28	00:00:02	100

House Easting Northing  
5 216871 378080

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	18-Feb	16:38:08	16:41:20	00:03:12	100
2	216143	377705	19-Feb	16:37:12	16:49:05	00:11:53	100
2	216143	377705	20-Feb	16:36:33	16:57:25	00:20:53	100
2	216143	377705	21-Feb	16:36:03	17:04:18	00:28:16	100
2	216143	377705	22-Feb	16:35:42	17:06:40	00:30:58	100
2	216143	377705	23-Feb	16:35:30	17:06:43	00:31:13	100
2	216143	377705	24-Feb	16:35:27	17:06:36	00:31:09	100
2	216143	377705	25-Feb	16:35:33	17:06:19	00:30:46	100
2	216143	377705	26-Feb	16:35:48	17:05:51	00:30:03	100
2	216143	377705	27-Feb	16:36:15	17:05:12	00:28:56	100
2	216143	377705	28-Feb	16:36:52	17:04:20	00:27:27	100
2	216143	377705	29-Feb	16:37:43	17:03:14	00:25:31	100
2	216143	377705	01-Mar	16:38:55	17:01:51	00:22:56	100
2	216143	377705	02-Mar	16:40:24	17:00:14	00:19:50	100
2	216143	377705	03-Mar	16:42:01	16:58:10	00:16:09	100
2	216143	377705	04-Mar	16:44:39	16:55:06	00:10:26	47.58
2	216143	377705	07-Oct	16:24:46	16:27:11	00:02:25	2.45
2	216143	377705	08-Oct	16:19:14	16:32:10	00:12:56	73.94
2	216143	377705	09-Oct	16:16:38	16:34:14	00:17:36	100
2	216143	377705	10-Oct	16:14:43	16:35:35	00:20:53	100
2	216143	377705	11-Oct	16:12:49	16:36:40	00:23:51	100
2	216143	377705	12-Oct	16:11:19	16:37:30	00:26:11	100
2	216143	377705	13-Oct	16:10:08	16:38:04	00:27:56	100
2	216143	377705	14-Oct	16:09:10	16:38:27	00:29:18	100

2	216143	377705	15-Oct	16:08:23	16:38:39	00:30:17	100
2	216143	377705	16-Oct	16:07:47	16:38:42	00:30:55	100
2	216143	377705	17-Oct	16:07:22	16:38:35	00:31:13	100
2	216143	377705	18-Oct	16:07:07	16:38:20	00:31:12	100
2	216143	377705	19-Oct	16:07:02	16:37:56	00:30:53	100
2	216143	377705	20-Oct	16:07:07	16:35:13	00:28:06	100
2	216143	377705	21-Oct	16:07:22	16:26:39	00:19:16	100
2	216143	377705	22-Oct	16:07:48	16:18:17	00:10:29	100
2	216143	377705	23-Oct	16:08:31	16:10:31	00:01:59	100
3	216382	377409	01-Jan	14:51:27	15:08:37	00:17:10	100
3	216382	377409	02-Jan	14:51:25	15:09:50	00:18:25	100
3	216382	377409	03-Jan	14:51:23	15:11:01	00:19:38	100
3	216382	377409	04-Jan	14:51:20	15:12:09	00:20:49	100
3	216382	377409	05-Jan	14:51:18	15:13:15	00:21:57	100
3	216382	377409	06-Jan	14:51:16	15:14:19	00:23:02	100
3	216382	377409	07-Jan	14:51:15	15:15:20	00:24:05	100
3	216382	377409	08-Jan	14:51:15	15:16:20	00:25:05	100
3	216382	377409	09-Jan	14:51:16	15:17:17	00:26:01	100
3	216382	377409	10-Jan	14:51:17	15:18:11	00:26:54	100
3	216382	377409	11-Jan	14:51:19	15:19:03	00:27:44	100
3	216382	377409	12-Jan	14:51:23	15:19:53	00:28:30	100
3	216382	377409	13-Jan	14:51:27	15:20:39	00:29:13	100
3	216382	377409	14-Jan	14:51:31	15:21:23	00:29:52	100
3	216382	377409	15-Jan	14:51:37	15:22:04	00:30:27	100
3	216382	377409	16-Jan	14:51:44	15:22:41	00:30:57	100
3	216382	377409	17-Jan	14:51:53	15:23:15	00:31:21	100
3	216382	377409	18-Jan	14:52:05	15:23:45	00:31:40	100
3	216382	377409	19-Jan	14:52:19	15:24:12	00:31:53	100
3	216382	377409	20-Jan	14:52:35	15:24:34	00:31:59	100
3	216382	377409	21-Jan	14:52:53	15:24:53	00:31:59	100
3	216382	377409	22-Jan	14:53:15	15:25:06	00:31:51	100
3	216382	377409	23-Jan	14:53:40	15:25:15	00:31:35	100
3	216382	377409	24-Jan	14:54:09	15:25:21	00:31:11	100
3	216382	377409	25-Jan	14:54:42	15:25:22	00:30:39	100
3	216382	377409	26-Jan	14:55:20	15:25:17	00:29:56	100
3	216382	377409	27-Jan	14:56:04	15:25:05	00:29:01	100
3	216382	377409	28-Jan	14:56:55	15:24:49	00:27:54	100
3	216382	377409	29-Jan	14:57:50	15:24:26	00:26:35	100
3	216382	377409	30-Jan	14:58:56	15:23:53	00:24:57	100
3	216382	377409	31-Jan	15:00:13	15:23:09	00:22:56	100
3	216382	377409	01-Feb	15:01:35	15:22:10	00:20:36	100
3	216382	377409	02-Feb	15:03:13	15:20:52	00:17:39	100
3	216382	377409	03-Feb	15:05:26	15:18:59	00:13:33	61.34
3	216382	377409	04-Feb	15:09:26	15:15:41	00:06:15	15.87
3	216382	377409	06-Nov	14:40:10	14:44:34	00:04:24	7.79

3	216382	377409	07-Nov	14:35:50	14:48:36	00:12:46	52.47
3	216382	377409	08-Nov	14:33:40	14:50:45	00:17:05	100
3	216382	377409	09-Nov	14:32:11	14:52:20	00:20:08	100
3	216382	377409	10-Nov	14:31:05	14:53:35	00:22:30	100
3	216382	377409	11-Nov	14:30:01	14:54:37	00:24:36	100
3	216382	377409	12-Nov	14:29:12	14:55:29	00:26:17	100
3	216382	377409	13-Nov	14:28:34	14:56:13	00:27:39	100
3	216382	377409	14-Nov	14:28:03	14:56:51	00:28:47	100
3	216382	377409	15-Nov	14:27:41	14:57:26	00:29:45	100
3	216382	377409	16-Nov	14:27:26	14:57:56	00:30:30	100
3	216382	377409	17-Nov	14:27:18	14:58:23	00:31:05	100
3	216382	377409	18-Nov	14:27:16	14:58:45	00:31:30	100
3	216382	377409	19-Nov	14:27:19	14:59:07	00:31:48	100
3	216382	377409	20-Nov	14:27:27	14:59:25	00:31:58	100
3	216382	377409	21-Nov	14:27:39	14:59:40	00:32:01	100
3	216382	377409	22-Nov	14:27:56	14:59:52	00:31:56	100
3	216382	377409	23-Nov	14:28:17	15:00:02	00:31:45	100
3	216382	377409	24-Nov	14:28:42	15:00:10	00:31:28	100
3	216382	377409	25-Nov	14:29:10	15:00:16	00:31:05	100
3	216382	377409	26-Nov	14:29:42	15:00:19	00:30:37	100
3	216382	377409	27-Nov	14:30:17	15:00:21	00:30:04	100
3	216382	377409	28-Nov	14:30:55	15:00:22	00:29:27	100
3	216382	377409	29-Nov	14:31:36	15:00:20	00:28:44	100
3	216382	377409	30-Nov	14:32:17	15:00:17	00:28:00	100
3	216382	377409	01-Dec	14:33:00	15:00:13	00:27:12	100
3	216382	377409	02-Dec	14:33:46	15:00:07	00:26:21	100
3	216382	377409	03-Dec	14:34:34	15:00:00	00:25:26	100
3	216382	377409	04-Dec	14:35:24	14:59:52	00:24:27	100
3	216382	377409	05-Dec	14:36:16	14:59:42	00:23:26	100
3	216382	377409	06-Dec	14:37:09	14:59:31	00:22:22	100
3	216382	377409	07-Dec	14:38:04	14:59:19	00:21:15	100
3	216382	377409	08-Dec	14:39:00	14:59:06	00:20:06	100
3	216382	377409	09-Dec	14:39:57	14:58:51	00:18:54	100
3	216382	377409	10-Dec	14:40:55	14:58:34	00:17:40	100
3	216382	377409	11-Dec	14:41:53	14:58:16	00:16:23	100
3	216382	377409	12-Dec	14:42:51	14:57:55	00:15:03	88.36
3	216382	377409	13-Dec	14:43:50	14:57:45	00:13:55	76.02
3	216382	377409	14-Dec	14:44:47	14:57:43	00:12:56	65.15
3	216382	377409	15-Dec	14:45:43	14:57:43	00:11:59	55.74
3	216382	377409	16-Dec	14:46:38	14:57:46	00:11:08	47.81
3	216382	377409	17-Dec	14:47:29	14:57:53	00:10:23	41.36
3	216382	377409	18-Dec	14:48:17	14:58:03	00:09:46	36.4
3	216382	377409	19-Dec	14:49:01	14:58:19	00:09:18	32.92
3	216382	377409	20-Dec	14:49:39	14:58:40	00:09:02	30.94
3	216382	377409	21-Dec	14:50:11	14:59:08	00:08:57	30.45
3	216382	377409	22-Dec	14:50:37	14:59:42	00:09:06	31.46

3	216382	377409	23-Dec	14:50:56	15:00:23	00:09:27	33.96
3	216382	377409	24-Dec	14:51:10	15:01:08	00:09:58	37.96
3	216382	377409	25-Dec	14:51:20	15:01:58	00:10:38	43.46
3	216382	377409	26-Dec	14:51:26	15:02:52	00:11:26	50.45
3	216382	377409	27-Dec	14:51:30	15:03:49	00:12:19	58.93
3	216382	377409	28-Dec	14:51:31	15:04:48	00:13:17	68.9
3	216382	377409	29-Dec	14:51:31	15:05:48	00:14:17	80.35
3	216382	377409	30-Dec	14:51:30	15:07:02	00:15:33	93.27
3	216382	377409	31-Dec	14:51:28	15:08:19	00:16:51	100

House Easting Northing  
6 216583 378115

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
1	215862	377603	21-Jan	16:23:54	16:32:58	00:09:03	34.19
1	215862	377603	22-Jan	16:22:03	16:35:23	00:13:20	77.05
1	215862	377603	23-Jan	16:20:48	16:37:31	00:16:43	100
1	215862	377603	24-Jan	16:19:52	16:39:32	00:19:40	100
1	215862	377603	25-Jan	16:19:07	16:41:09	00:22:02	100
1	215862	377603	26-Jan	16:18:32	16:42:29	00:23:57	100
1	215862	377603	27-Jan	16:18:04	16:43:39	00:25:34	100
1	215862	377603	28-Jan	16:17:41	16:44:56	00:27:14	100
1	215862	377603	29-Jan	16:17:22	16:45:59	00:28:37	100
1	215862	377603	30-Jan	16:17:08	16:46:52	00:29:44	100
1	215862	377603	31-Jan	16:16:59	16:47:37	00:30:37	100
1	215862	377603	01-Feb	16:16:57	16:48:13	00:31:15	100
1	215862	377603	02-Feb	16:16:59	16:48:41	00:31:41	100
1	215862	377603	03-Feb	16:17:08	16:49:01	00:31:53	100
1	215862	377603	04-Feb	16:17:22	16:49:14	00:31:52	100
1	215862	377603	05-Feb	16:17:42	16:49:20	00:31:37	100
1	215862	377603	06-Feb	16:18:10	16:49:17	00:31:08	100
1	215862	377603	07-Feb	16:18:43	16:49:06	00:30:23	100
1	215862	377603	08-Feb	16:19:24	16:48:46	00:29:22	100
1	215862	377603	09-Feb	16:20:15	16:48:16	00:28:01	100
1	215862	377603	10-Feb	16:21:21	16:47:34	00:26:14	100
1	215862	377603	11-Feb	16:22:46	16:46:39	00:23:53	100
1	215862	377603	12-Feb	16:24:45	16:45:26	00:20:41	79.67
1	215862	377603	13-Feb	16:26:36	16:43:46	00:17:10	100
1	215862	377603	14-Feb	16:29:19	16:41:28	00:12:09	39.09
1	215862	377603	26-Oct	16:03:34	16:06:58	00:03:25	3.64
1	215862	377603	27-Oct	15:58:39	16:11:22	00:12:43	44.37
1	215862	377603	28-Oct	15:55:59	16:13:28	00:17:28	100
1	215862	377603	29-Oct	15:54:05	16:14:59	00:20:55	82.85
1	215862	377603	30-Oct	15:52:06	16:16:07	00:24:01	100

1	215862	377603	31-Oct	15:50:41	16:16:59	00:26:18	100
1	215862	377603	01-Nov	15:49:37	16:17:41	00:28:03	100
1	215862	377603	02-Nov	15:48:48	16:18:12	00:29:24	100
1	215862	377603	03-Nov	15:48:11	16:18:34	00:30:23	100
1	215862	377603	04-Nov	15:47:43	16:18:50	00:31:07	100
1	215862	377603	05-Nov	15:47:22	16:18:59	00:31:37	100
1	215862	377603	06-Nov	15:47:09	16:19:02	00:31:52	100
1	215862	377603	07-Nov	15:47:05	16:18:59	00:31:54	100
1	215862	377603	08-Nov	15:47:08	16:18:50	00:31:42	100
1	215862	377603	09-Nov	15:47:18	16:18:35	00:31:18	100
1	215862	377603	10-Nov	15:47:34	16:18:15	00:30:40	100
1	215862	377603	11-Nov	15:47:58	16:17:48	00:29:50	100
1	215862	377603	12-Nov	15:48:28	16:17:13	00:28:45	100
1	215862	377603	13-Nov	15:49:06	16:16:31	00:27:24	100
1	215862	377603	14-Nov	15:49:50	16:15:38	00:25:48	100
1	215862	377603	15-Nov	15:50:39	16:14:50	00:24:10	100
1	215862	377603	16-Nov	15:51:37	16:13:56	00:22:19	100
1	215862	377603	17-Nov	15:52:45	16:12:48	00:20:03	100
1	215862	377603	18-Nov	15:54:07	16:11:18	00:17:11	100
1	215862	377603	19-Nov	15:55:46	16:09:42	00:13:55	83.91
1	215862	377603	20-Nov	15:57:59	16:07:56	00:09:57	41.35
2	216143	377705	10-Jan	15:46:48	15:53:16	00:06:28	11.73
2	216143	377705	11-Jan	15:44:29	15:56:25	00:11:56	40.66
2	216143	377705	12-Jan	15:43:03	15:58:40	00:15:37	70.93
2	216143	377705	13-Jan	15:41:58	16:00:32	00:18:35	100
2	216143	377705	14-Jan	15:41:04	16:02:29	00:21:25	100
2	216143	377705	15-Jan	15:40:19	16:04:20	00:24:01	100
2	216143	377705	16-Jan	15:39:40	16:06:11	00:26:31	100
2	216143	377705	17-Jan	15:39:07	16:07:49	00:28:42	100
2	216143	377705	18-Jan	15:38:37	16:09:17	00:30:40	100
2	216143	377705	19-Jan	15:38:11	16:10:36	00:32:26	100
2	216143	377705	20-Jan	15:37:48	16:11:49	00:34:01	100
2	216143	377705	21-Jan	15:37:28	16:12:56	00:35:28	100
2	216143	377705	22-Jan	15:37:12	16:14:16	00:37:04	100
2	216143	377705	23-Jan	15:36:57	16:15:28	00:38:30	100
2	216143	377705	24-Jan	15:36:46	16:16:33	00:39:48	100
2	216143	377705	25-Jan	15:36:34	16:17:32	00:40:59	100
2	216143	377705	26-Jan	15:36:24	16:18:26	00:42:02	100
2	216143	377705	27-Jan	15:36:18	16:19:14	00:42:56	100
2	216143	377705	28-Jan	15:36:14	16:19:56	00:43:42	100
2	216143	377705	29-Jan	15:36:13	16:20:34	00:44:21	100
2	216143	377705	30-Jan	15:36:15	16:21:06	00:44:51	100
2	216143	377705	31-Jan	15:36:21	16:21:33	00:45:12	100
2	216143	377705	01-Feb	15:36:30	16:21:55	00:45:25	100
2	216143	377705	02-Feb	15:36:42	16:22:12	00:45:30	100

2	216143	377705	03-Feb	15:36:58	16:22:23	00:45:25	100
2	216143	377705	04-Feb	15:37:19	16:22:30	00:45:11	100
2	216143	377705	05-Feb	15:37:43	16:22:30	00:44:47	100
2	216143	377705	06-Feb	15:38:13	16:22:24	00:44:12	100
2	216143	377705	07-Feb	15:38:44	16:22:13	00:43:28	100
2	216143	377705	08-Feb	15:39:22	16:21:55	00:42:33	100
2	216143	377705	09-Feb	15:40:06	16:21:29	00:41:23	100
2	216143	377705	10-Feb	15:40:58	16:20:56	00:39:58	100
2	216143	377705	11-Feb	15:41:59	16:20:15	00:38:15	100
2	216143	377705	12-Feb	15:43:14	16:19:24	00:36:10	100
2	216143	377705	13-Feb	15:44:44	16:18:22	00:33:38	100
2	216143	377705	14-Feb	15:46:39	16:17:06	00:30:27	100
2	216143	377705	15-Feb	15:48:24	16:15:33	00:27:09	100
2	216143	377705	16-Feb	15:50:23	16:13:39	00:23:17	100
2	216143	377705	17-Feb	15:53:11	16:11:10	00:17:59	62.66
2	216143	377705	18-Feb	15:57:13	16:07:15	00:10:02	27.78
2	216143	377705	23-Oct	15:27:03	15:38:04	00:11:01	33.72
2	216143	377705	24-Oct	15:23:02	15:41:31	00:18:29	67.32
2	216143	377705	25-Oct	15:20:10	15:43:44	00:23:34	100
2	216143	377705	26-Oct	15:18:05	15:45:26	00:27:20	100
2	216143	377705	27-Oct	15:16:14	15:46:49	00:30:35	100
2	216143	377705	28-Oct	15:14:15	15:47:57	00:33:42	100
2	216143	377705	29-Oct	15:12:41	15:48:53	00:36:12	100
2	216143	377705	30-Oct	15:11:25	15:49:41	00:38:16	100
2	216143	377705	31-Oct	15:10:22	15:50:20	00:39:58	100
2	216143	377705	01-Nov	15:09:31	15:50:53	00:41:22	100
2	216143	377705	02-Nov	15:08:48	15:51:19	00:42:31	100
2	216143	377705	03-Nov	15:08:14	15:51:41	00:43:26	100
2	216143	377705	04-Nov	15:07:47	15:51:57	00:44:10	100
2	216143	377705	05-Nov	15:07:24	15:52:09	00:44:45	100
2	216143	377705	06-Nov	15:07:07	15:52:17	00:45:10	100
2	216143	377705	07-Nov	15:06:56	15:52:21	00:45:24	100
2	216143	377705	08-Nov	15:06:51	15:52:21	00:45:30	100
2	216143	377705	09-Nov	15:06:51	15:52:18	00:45:26	100
2	216143	377705	10-Nov	15:06:56	15:52:11	00:45:14	100
2	216143	377705	11-Nov	15:07:07	15:52:01	00:44:54	100
2	216143	377705	12-Nov	15:07:21	15:51:47	00:44:26	100
2	216143	377705	13-Nov	15:07:41	15:51:30	00:43:49	100
2	216143	377705	14-Nov	15:08:05	15:51:09	00:43:04	100
2	216143	377705	15-Nov	15:08:33	15:50:45	00:42:12	100
2	216143	377705	16-Nov	15:09:06	15:50:17	00:41:11	100
2	216143	377705	17-Nov	15:09:44	15:49:46	00:40:02	100
2	216143	377705	18-Nov	15:10:23	15:49:09	00:38:46	100
2	216143	377705	19-Nov	15:11:05	15:48:28	00:37:23	100
2	216143	377705	20-Nov	15:11:52	15:47:41	00:35:49	100
2	216143	377705	21-Nov	15:12:43	15:47:05	00:34:22	100

2	216143	377705	22-Nov	15:13:39	15:46:28	00:32:49	100
2	216143	377705	23-Nov	15:14:39	15:45:45	00:31:06	100
2	216143	377705	24-Nov	15:15:45	15:44:57	00:29:12	100
2	216143	377705	25-Nov	15:16:55	15:44:01	00:27:05	100
2	216143	377705	26-Nov	15:18:12	15:42:54	00:24:41	100
2	216143	377705	27-Nov	15:19:37	15:41:43	00:22:07	100
2	216143	377705	28-Nov	15:21:10	15:40:31	00:19:22	100
2	216143	377705	29-Nov	15:22:55	15:39:25	00:16:30	79.39
2	216143	377705	30-Nov	15:24:58	15:38:03	00:13:05	49
2	216143	377705	01-Dec	15:27:40	15:36:05	00:08:25	19.92
3	216382	377409	01-Jan	13:28:47	13:53:26	00:24:39	100
3	216382	377409	02-Jan	13:29:41	13:53:29	00:23:48	100
3	216382	377409	03-Jan	13:30:39	13:53:27	00:22:49	100
3	216382	377409	04-Jan	13:31:41	13:53:20	00:21:39	100
3	216382	377409	05-Jan	13:32:50	13:53:07	00:20:17	100
3	216382	377409	06-Jan	13:34:07	13:52:45	00:18:39	96.44
3	216382	377409	07-Jan	13:35:34	13:52:13	00:16:39	73.1
3	216382	377409	08-Jan	13:37:19	13:51:24	00:14:06	48.36
3	216382	377409	09-Jan	13:39:37	13:50:08	00:10:30	22.23
3	216382	377409	10-Jan	13:43:44	13:47:10	00:03:27	2.55
3	216382	377409	02-Dec	13:23:40	13:31:42	00:08:02	9.72
3	216382	377409	03-Dec	13:21:35	13:34:12	00:12:37	36.3
3	216382	377409	04-Dec	13:20:28	13:36:01	00:15:32	61.52
3	216382	377409	05-Dec	13:19:45	13:37:30	00:17:45	85.37
3	216382	377409	06-Dec	13:19:16	13:38:48	00:19:32	100
3	216382	377409	07-Dec	13:18:57	13:39:58	00:21:01	100
3	216382	377409	08-Dec	13:18:45	13:41:02	00:22:16	100
3	216382	377409	09-Dec	13:18:40	13:42:00	00:23:20	100
3	216382	377409	10-Dec	13:18:39	13:42:54	00:24:15	100
3	216382	377409	11-Dec	13:18:43	13:43:45	00:25:02	100
3	216382	377409	12-Dec	13:18:51	13:44:33	00:25:42	100
3	216382	377409	13-Dec	13:19:02	13:45:19	00:26:17	100
3	216382	377409	14-Dec	13:19:13	13:46:02	00:26:49	100
3	216382	377409	15-Dec	13:19:27	13:46:43	00:27:16	100
3	216382	377409	16-Dec	13:19:43	13:47:22	00:27:38	100
3	216382	377409	17-Dec	13:20:03	13:47:59	00:27:56	100
3	216382	377409	18-Dec	13:20:25	13:48:34	00:28:09	100
3	216382	377409	19-Dec	13:20:50	13:49:08	00:28:18	100
3	216382	377409	20-Dec	13:21:17	13:49:40	00:28:24	100
3	216382	377409	21-Dec	13:21:46	13:50:11	00:28:25	100
3	216382	377409	22-Dec	13:22:17	13:50:39	00:28:23	100
3	216382	377409	23-Dec	13:22:50	13:51:06	00:28:16	100
3	216382	377409	24-Dec	13:23:25	13:51:32	00:28:06	100
3	216382	377409	25-Dec	13:24:03	13:51:55	00:27:52	100
3	216382	377409	26-Dec	13:24:43	13:52:16	00:27:33	100

3	216382	377409	27-Dec	13:25:26	13:52:35	00:27:10	100
3	216382	377409	28-Dec	13:26:11	13:52:52	00:26:41	100
3	216382	377409	29-Dec	13:26:58	13:53:06	00:26:08	100
3	216382	377409	30-Dec	13:27:45	13:53:17	00:25:32	100
3	216382	377409	31-Dec	13:28:34	13:53:25	00:24:50	100

House Easting Northing  
7 217119 377988

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
3	216382	377409	03-Feb	16:09:37	16:16:55	00:07:17	24.06
3	216382	377409	04-Feb	16:06:53	16:20:01	00:13:08	80.4
3	216382	377409	05-Feb	16:05:13	16:22:10	00:16:57	100
3	216382	377409	06-Feb	16:04:00	16:23:45	00:19:45	100
3	216382	377409	07-Feb	16:03:04	16:24:58	00:21:54	100
3	216382	377409	08-Feb	16:02:21	16:25:55	00:23:34	100
3	216382	377409	09-Feb	16:01:49	16:26:39	00:24:50	100
3	216382	377409	10-Feb	16:01:25	16:27:11	00:25:46	100
3	216382	377409	11-Feb	16:01:07	16:27:32	00:26:25	100
3	216382	377409	12-Feb	16:00:57	16:27:44	00:26:47	100
3	216382	377409	13-Feb	16:00:55	16:27:46	00:26:51	100
3	216382	377409	14-Feb	16:01:01	16:27:38	00:26:37	100
3	216382	377409	15-Feb	16:01:16	16:27:20	00:26:04	100
3	216382	377409	16-Feb	16:01:40	16:26:50	00:25:10	100
3	216382	377409	17-Feb	16:02:16	16:26:08	00:23:52	100
3	216382	377409	18-Feb	16:03:06	16:25:14	00:22:09	100
3	216382	377409	19-Feb	16:04:14	16:24:04	00:19:50	100
3	216382	377409	20-Feb	16:05:47	16:22:29	00:16:42	100
3	216382	377409	21-Feb	16:07:47	16:20:11	00:12:25	73.29
3	216382	377409	22-Feb	16:12:12	16:15:18	00:03:06	4.49
3	216382	377409	19-Oct	15:42:13	15:48:00	00:05:47	15.47
3	216382	377409	20-Oct	15:38:27	15:51:38	00:13:11	82.83
3	216382	377409	21-Oct	15:36:20	15:53:29	00:17:10	100
3	216382	377409	22-Oct	15:34:35	15:54:45	00:20:10	100
3	216382	377409	23-Oct	15:33:17	15:55:39	00:22:22	100
3	216382	377409	24-Oct	15:32:17	15:56:19	00:24:01	100
3	216382	377409	25-Oct	15:31:32	15:56:48	00:25:16	100
3	216382	377409	26-Oct	15:30:59	15:57:07	00:26:08	100
3	216382	377409	27-Oct	15:30:38	15:57:17	00:26:39	100
3	216382	377409	28-Oct	15:30:26	15:57:18	00:26:52	100
3	216382	377409	29-Oct	15:30:24	15:57:11	00:26:47	100
3	216382	377409	30-Oct	15:30:31	15:56:56	00:26:26	100
3	216382	377409	31-Oct	15:30:47	15:56:33	00:25:46	100
3	216382	377409	01-Nov	15:31:10	15:56:01	00:24:51	100

3	216382	377409	02-Nov	15:31:44	15:55:20	00:23:36	100
3	216382	377409	03-Nov	15:32:29	15:54:27	00:21:58	100
3	216382	377409	04-Nov	15:33:29	15:53:20	00:19:51	100
3	216382	377409	05-Nov	15:34:46	15:51:54	00:17:08	100
3	216382	377409	06-Nov	15:36:31	15:49:57	00:13:26	83.74
3	216382	377409	07-Nov	15:39:15	15:47:09	00:07:54	28.25

House Easting Northing  
8 215948 378790

There are no shadows cast on this window

House Easting Northing  
9 215796 378120

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
1	215862	377603	01-Jan	11:26:56	12:15:17	00:48:21	100
1	215862	377603	02-Jan	11:27:28	12:15:41	00:48:13	100
1	215862	377603	03-Jan	11:28:00	12:16:04	00:48:04	100
1	215862	377603	04-Jan	11:28:33	12:16:26	00:47:53	100
1	215862	377603	05-Jan	11:29:06	12:16:46	00:47:40	100
1	215862	377603	06-Jan	11:29:40	12:17:05	00:47:25	100
1	215862	377603	07-Jan	11:30:15	12:17:22	00:47:07	100
1	215862	377603	08-Jan	11:30:50	12:17:37	00:46:46	100
1	215862	377603	09-Jan	11:31:27	12:17:50	00:46:23	100
1	215862	377603	10-Jan	11:32:05	12:18:01	00:45:56	100
1	215862	377603	11-Jan	11:32:44	12:18:09	00:45:25	100
1	215862	377603	12-Jan	11:33:25	12:21:45	00:48:20	100
1	215862	377603	13-Jan	11:34:07	12:22:13	00:48:06	100
1	215862	377603	14-Jan	11:34:51	12:22:12	00:47:21	100
1	215862	377603	15-Jan	11:35:38	12:22:07	00:46:30	100
1	215862	377603	16-Jan	11:36:27	12:21:58	00:45:32	100
1	215862	377603	17-Jan	11:37:19	12:21:45	00:44:26	100
1	215862	377603	18-Jan	11:38:14	12:21:26	00:43:12	100
1	215862	377603	19-Jan	11:39:13	12:21:02	00:41:49	100
1	215862	377603	20-Jan	11:40:14	12:20:30	00:40:16	100
1	215862	377603	21-Jan	11:41:21	12:19:51	00:38:30	100
1	215862	377603	22-Jan	11:42:34	12:19:02	00:36:28	100
1	215862	377603	23-Jan	11:43:54	12:18:01	00:34:07	100
1	215862	377603	24-Jan	11:45:25	12:16:44	00:31:18	100
1	215862	377603	25-Jan	11:47:10	12:15:02	00:27:52	100
1	215862	377603	26-Jan	11:49:15	12:12:37	00:23:22	100
1	215862	377603	27-Jan	11:51:57	12:08:36	00:16:40	60.93
1	215862	377603	28-Jan	11:56:25	12:03:07	00:06:42	11.54

1	215862	377603	14-Nov	11:25:29	11:38:00	00:12:31	36.81
1	215862	377603	15-Nov	11:22:39	11:42:59	00:20:21	85.01
1	215862	377603	16-Nov	11:20:43	11:46:32	00:25:48	100
1	215862	377603	17-Nov	11:19:16	11:48:55	00:29:40	100
1	215862	377603	18-Nov	11:18:06	11:50:50	00:32:44	100
1	215862	377603	19-Nov	11:17:10	11:52:27	00:35:17	100
1	215862	377603	20-Nov	11:16:24	11:53:52	00:37:28	100
1	215862	377603	21-Nov	11:15:46	11:55:07	00:39:21	100
1	215862	377603	22-Nov	11:15:16	11:56:16	00:40:59	100
1	215862	377603	23-Nov	11:14:52	11:57:19	00:42:27	100
1	215862	377603	24-Nov	11:14:32	11:58:17	00:43:46	100
1	215862	377603	25-Nov	11:14:16	11:59:12	00:44:55	100
1	215862	377603	26-Nov	11:14:05	12:00:02	00:45:57	100
1	215862	377603	27-Nov	11:13:58	12:00:50	00:46:52	100
1	215862	377603	28-Nov	11:13:55	12:01:36	00:47:40	100
1	215862	377603	29-Nov	11:13:56	12:02:19	00:48:23	100
1	215862	377603	30-Nov	11:13:59	11:59:04	00:45:05	100
1	215862	377603	01-Dec	11:14:06	11:59:44	00:45:38	100
1	215862	377603	02-Dec	11:14:15	12:00:22	00:46:07	100
1	215862	377603	03-Dec	11:14:27	12:00:59	00:46:33	100
1	215862	377603	04-Dec	11:14:40	12:01:35	00:46:55	100
1	215862	377603	05-Dec	11:14:56	12:02:10	00:47:14	100
1	215862	377603	06-Dec	11:15:14	12:02:44	00:47:31	100
1	215862	377603	07-Dec	11:15:33	12:03:18	00:47:45	100
1	215862	377603	08-Dec	11:15:53	12:03:50	00:47:57	100
1	215862	377603	09-Dec	11:16:15	12:04:23	00:48:07	100
1	215862	377603	10-Dec	11:16:38	12:04:54	00:48:16	100
1	215862	377603	11-Dec	11:17:03	12:05:26	00:48:23	100
1	215862	377603	12-Dec	11:17:28	12:05:57	00:48:29	100
1	215862	377603	13-Dec	11:17:54	12:06:28	00:48:34	100
1	215862	377603	14-Dec	11:18:21	12:06:59	00:48:38	100
1	215862	377603	15-Dec	11:18:48	12:07:29	00:48:41	100
1	215862	377603	16-Dec	11:19:16	12:07:59	00:48:44	100
1	215862	377603	17-Dec	11:19:44	12:08:30	00:48:46	100
1	215862	377603	18-Dec	11:20:13	12:09:00	00:48:47	100
1	215862	377603	19-Dec	11:20:42	12:09:30	00:48:48	100
1	215862	377603	20-Dec	11:21:12	12:10:00	00:48:48	100
1	215862	377603	21-Dec	11:21:42	12:10:30	00:48:49	100
1	215862	377603	22-Dec	11:22:12	12:10:59	00:48:48	100
1	215862	377603	23-Dec	11:22:42	12:11:29	00:48:48	100
1	215862	377603	24-Dec	11:23:12	12:11:59	00:48:47	100
1	215862	377603	25-Dec	11:23:42	12:12:28	00:48:45	100
1	215862	377603	26-Dec	11:24:13	12:12:56	00:48:43	100
1	215862	377603	27-Dec	11:24:44	12:13:25	00:48:41	100
1	215862	377603	28-Dec	11:25:15	12:13:52	00:48:38	100
1	215862	377603	29-Dec	11:25:46	12:14:19	00:48:33	100

1	215862	377603	30-Dec	11:26:17	12:14:45	00:48:28	100
1	215862	377603	31-Dec	11:26:49	12:15:11	00:48:22	100
2	216143	377705	22-Jan	09:52:52	09:58:05	00:05:13	7.21
2	216143	377705	23-Jan	09:48:52	10:02:34	00:13:41	50.94
2	216143	377705	24-Jan	09:46:42	10:05:13	00:18:32	95.8
2	216143	377705	25-Jan	09:44:50	10:07:18	00:22:28	85.81
2	216143	377705	26-Jan	09:42:40	10:09:03	00:26:23	70.43
2	216143	377705	27-Jan	09:40:39	10:10:33	00:29:54	100
2	216143	377705	28-Jan	09:39:05	10:11:53	00:32:48	100
2	216143	377705	29-Jan	09:37:48	10:13:03	00:35:15	100
2	216143	377705	30-Jan	09:36:43	10:14:06	00:37:23	100
2	216143	377705	31-Jan	09:35:47	10:15:01	00:39:14	100
2	216143	377705	01-Feb	09:34:59	10:15:50	00:40:52	100
2	216143	377705	02-Feb	09:34:17	10:16:33	00:42:16	100
2	216143	377705	03-Feb	09:33:40	10:17:10	00:43:30	100
2	216143	377705	04-Feb	09:33:09	10:17:44	00:44:35	100
2	216143	377705	05-Feb	09:32:43	10:18:13	00:45:30	100
2	216143	377705	06-Feb	09:32:21	10:18:36	00:46:15	100
2	216143	377705	07-Feb	09:32:04	10:18:53	00:46:49	100
2	216143	377705	08-Feb	09:31:51	10:19:05	00:47:14	100
2	216143	377705	09-Feb	09:31:42	10:19:11	00:47:29	100
2	216143	377705	10-Feb	09:31:38	10:19:11	00:47:33	100
2	216143	377705	11-Feb	09:31:38	10:19:06	00:47:28	100
2	216143	377705	12-Feb	09:31:43	10:18:54	00:47:11	100
2	216143	377705	13-Feb	09:31:53	10:18:36	00:46:43	100
2	216143	377705	14-Feb	09:32:07	10:18:11	00:46:04	100
2	216143	377705	15-Feb	09:32:28	10:17:39	00:45:11	100
2	216143	377705	16-Feb	09:32:54	10:16:59	00:44:05	100
2	216143	377705	17-Feb	09:33:27	10:16:10	00:42:43	100
2	216143	377705	18-Feb	09:34:07	10:15:10	00:41:04	100
2	216143	377705	19-Feb	09:34:56	10:13:59	00:39:04	100
2	216143	377705	20-Feb	09:35:52	10:12:35	00:36:43	100
2	216143	377705	21-Feb	09:36:59	10:10:51	00:33:52	100
2	216143	377705	22-Feb	09:38:22	10:08:41	00:30:19	100
2	216143	377705	23-Feb	09:40:07	10:05:44	00:25:38	100
2	216143	377705	24-Feb	09:42:26	10:01:44	00:19:18	100
2	216143	377705	25-Feb	09:46:06	09:57:06	00:11:00	35.77
2	216143	377705	16-Oct	09:20:40	09:27:18	00:06:39	12.79
2	216143	377705	17-Oct	09:15:31	09:32:23	00:16:52	81.56
2	216143	377705	18-Oct	09:12:35	09:36:07	00:23:32	100
2	216143	377705	19-Oct	09:10:22	09:39:10	00:28:47	100
2	216143	377705	20-Oct	09:08:36	09:41:14	00:32:38	100
2	216143	377705	21-Oct	09:07:07	09:42:48	00:35:41	100
2	216143	377705	22-Oct	09:05:53	09:44:03	00:38:11	100
2	216143	377705	23-Oct	09:04:47	09:45:05	00:40:17	100

2	216143	377705	24-Oct	09:03:52	09:45:55	00:42:03	100
2	216143	377705	25-Oct	09:03:05	09:46:36	00:43:31	100
2	216143	377705	26-Oct	09:02:27	09:47:10	00:44:44	100
2	216143	377705	27-Oct	09:01:56	09:47:38	00:45:42	100
2	216143	377705	28-Oct	09:01:32	09:47:59	00:46:27	100
2	216143	377705	29-Oct	09:01:15	09:48:15	00:46:59	100
2	216143	377705	30-Oct	09:01:04	09:48:26	00:47:22	100
2	216143	377705	31-Oct	09:00:59	09:48:33	00:47:33	100
2	216143	377705	01-Nov	09:01:01	09:48:35	00:47:33	100
2	216143	377705	02-Nov	09:01:09	09:48:33	00:47:24	100
2	216143	377705	03-Nov	09:01:22	09:48:27	00:47:05	100
2	216143	377705	04-Nov	09:01:41	09:48:17	00:46:36	100
2	216143	377705	05-Nov	09:02:06	09:48:03	00:45:58	100
2	216143	377705	06-Nov	09:02:36	09:47:46	00:45:09	100
2	216143	377705	07-Nov	09:03:13	09:47:24	00:44:10	100
2	216143	377705	08-Nov	09:03:57	09:47:00	00:43:03	100
2	216143	377705	09-Nov	09:04:47	09:46:34	00:41:46	100
2	216143	377705	10-Nov	09:05:45	09:46:03	00:40:18	100
2	216143	377705	11-Nov	09:06:51	09:45:28	00:38:36	100
2	216143	377705	12-Nov	09:08:07	09:44:47	00:36:41	100
2	216143	377705	13-Nov	09:09:34	09:44:02	00:34:28	100
2	216143	377705	14-Nov	09:11:15	09:43:09	00:31:54	100
2	216143	377705	15-Nov	09:13:17	09:42:09	00:28:52	100
2	216143	377705	16-Nov	09:15:54	09:40:59	00:25:05	55.6
2	216143	377705	17-Nov	09:18:20	09:39:36	00:21:16	100
2	216143	377705	18-Nov	09:20:36	09:37:51	00:17:15	81.95
2	216143	377705	19-Nov	09:23:31	09:35:24	00:11:53	37.96
3	216382	377409	15-Jan	09:48:40	09:51:41	00:03:01	14.15
3	216382	377409	16-Jan	09:45:58	09:54:26	00:08:29	49.35
3	216382	377409	17-Jan	09:43:05	09:56:21	00:13:16	85.83
3	216382	377409	18-Jan	09:41:31	09:57:53	00:16:22	100
3	216382	377409	19-Jan	09:40:16	09:59:12	00:18:56	100
3	216382	377409	20-Jan	09:38:38	10:00:21	00:21:43	100
3	216382	377409	21-Jan	09:37:54	10:01:22	00:23:28	100
3	216382	377409	22-Jan	09:37:18	10:02:15	00:24:56	100
3	216382	377409	23-Jan	09:36:51	10:03:02	00:26:11	100
3	216382	377409	24-Jan	09:36:29	10:03:42	00:27:13	100
3	216382	377409	25-Jan	09:36:13	10:04:19	00:28:06	100
3	216382	377409	26-Jan	09:36:03	10:04:50	00:28:47	100
3	216382	377409	27-Jan	09:35:57	10:05:15	00:29:18	100
3	216382	377409	28-Jan	09:35:56	10:05:33	00:29:37	100
3	216382	377409	29-Jan	09:35:59	10:05:45	00:29:46	100
3	216382	377409	30-Jan	09:36:09	10:05:51	00:29:43	100
3	216382	377409	31-Jan	09:36:23	10:05:50	00:29:27	100
3	216382	377409	01-Feb	09:36:43	10:05:41	00:28:58	100

3	216382	377409	02-Feb	09:37:09	10:05:24	00:28:15	100
3	216382	377409	03-Feb	09:37:43	10:04:58	00:27:15	100
3	216382	377409	04-Feb	09:38:25	10:04:20	00:25:55	100
3	216382	377409	05-Feb	09:39:17	10:03:28	00:24:11	100
3	216382	377409	06-Feb	09:40:20	10:02:18	00:21:58	100
3	216382	377409	07-Feb	09:41:39	10:00:40	00:19:00	100
3	216382	377409	08-Feb	09:43:26	09:57:59	00:14:33	93.51
3	216382	377409	09-Feb	09:46:11	09:54:39	00:08:28	33.12
3	216382	377409	01-Nov	09:19:11	09:20:29	00:01:18	0.76
3	216382	377409	02-Nov	09:14:08	09:25:38	00:11:30	60.52
3	216382	377409	03-Nov	09:12:01	09:28:52	00:16:51	100
3	216382	377409	04-Nov	09:10:34	09:30:59	00:20:26	100
3	216382	377409	05-Nov	09:09:30	09:32:29	00:22:59	100
3	216382	377409	06-Nov	09:08:40	09:33:38	00:24:58	100
3	216382	377409	07-Nov	09:08:01	09:34:32	00:26:30	100
3	216382	377409	08-Nov	09:07:34	09:35:15	00:27:41	100
3	216382	377409	09-Nov	09:07:16	09:35:50	00:28:34	100
3	216382	377409	10-Nov	09:07:06	09:36:17	00:29:11	100
3	216382	377409	11-Nov	09:07:04	09:36:39	00:29:35	100
3	216382	377409	12-Nov	09:07:09	09:36:54	00:29:46	100
3	216382	377409	13-Nov	09:07:20	09:37:05	00:29:45	100
3	216382	377409	14-Nov	09:07:38	09:37:11	00:29:33	100
3	216382	377409	15-Nov	09:08:03	09:37:13	00:29:10	100
3	216382	377409	16-Nov	09:08:34	09:37:10	00:28:36	100
3	216382	377409	17-Nov	09:09:11	09:37:03	00:27:52	100
3	216382	377409	18-Nov	09:09:56	09:36:52	00:26:57	100
3	216382	377409	19-Nov	09:10:47	09:36:39	00:25:52	100
3	216382	377409	20-Nov	09:11:47	09:36:21	00:24:34	100
3	216382	377409	21-Nov	09:12:56	09:35:58	00:23:02	100
3	216382	377409	22-Nov	09:14:21	09:35:29	00:21:08	100
3	216382	377409	23-Nov	09:16:29	09:34:53	00:18:24	100
3	216382	377409	24-Nov	09:18:20	09:34:08	00:15:48	100
3	216382	377409	25-Nov	09:21:02	09:33:10	00:12:08	76.64
3	216382	377409	26-Nov	09:24:31	09:31:48	00:07:18	40.82
3	216382	377409	27-Nov	09:27:51	09:29:13	00:01:22	6.23
4	216129	377270	01-Jan	10:38:19	11:09:36	00:31:17	100
4	216129	377270	02-Jan	10:38:48	11:10:03	00:31:15	100
4	216129	377270	03-Jan	10:39:17	11:10:28	00:31:10	100
4	216129	377270	04-Jan	10:39:47	11:10:52	00:31:04	100
4	216129	377270	05-Jan	10:40:18	11:11:14	00:30:56	100
4	216129	377270	06-Jan	10:40:49	11:11:34	00:30:45	100
4	216129	377270	07-Jan	10:41:22	11:11:53	00:30:31	100
4	216129	377270	08-Jan	10:41:56	11:12:09	00:30:13	100
4	216129	377270	09-Jan	10:42:32	11:12:22	00:29:50	100
4	216129	377270	10-Jan	10:43:09	11:12:32	00:29:23	100

4	216129	377270	11-Jan	10:43:49	11:12:38	00:28:50	100
4	216129	377270	12-Jan	10:44:31	11:12:41	00:28:10	100
4	216129	377270	13-Jan	10:45:16	11:12:38	00:27:22	100
4	216129	377270	14-Jan	10:46:05	11:12:31	00:26:25	100
4	216129	377270	15-Jan	10:46:59	11:12:16	00:25:17	100
4	216129	377270	16-Jan	10:47:57	11:11:54	00:23:56	100
4	216129	377270	17-Jan	10:49:01	11:11:21	00:22:20	100
4	216129	377270	18-Jan	10:50:14	11:10:33	00:20:19	100
4	216129	377270	19-Jan	10:51:39	11:09:24	00:17:45	100
4	216129	377270	20-Jan	10:53:24	11:07:27	00:14:03	73.01
4	216129	377270	21-Jan	10:55:49	11:04:25	00:08:35	31.51
4	216129	377270	20-Nov	10:32:54	10:36:26	00:03:32	5.25
4	216129	377270	21-Nov	10:29:42	10:40:28	00:10:45	47.01
4	216129	377270	22-Nov	10:28:11	10:43:48	00:15:37	87.63
4	216129	377270	23-Nov	10:27:10	10:45:56	00:18:46	100
4	216129	377270	24-Nov	10:26:27	10:47:33	00:21:06	100
4	216129	377270	25-Nov	10:25:56	10:48:52	00:22:56	100
4	216129	377270	26-Nov	10:25:34	10:50:00	00:24:26	100
4	216129	377270	27-Nov	10:25:19	10:51:01	00:25:42	100
4	216129	377270	28-Nov	10:25:09	10:51:55	00:26:46	100
4	216129	377270	29-Nov	10:25:05	10:52:44	00:27:39	100
4	216129	377270	30-Nov	10:25:06	10:53:30	00:28:24	100
4	216129	377270	01-Dec	10:25:11	10:54:13	00:29:01	100
4	216129	377270	02-Dec	10:25:20	10:54:52	00:29:32	100
4	216129	377270	03-Dec	10:25:32	10:55:30	00:29:58	100
4	216129	377270	04-Dec	10:25:47	10:56:06	00:30:19	100
4	216129	377270	05-Dec	10:26:04	10:56:40	00:30:35	100
4	216129	377270	06-Dec	10:26:24	10:57:13	00:30:49	100
4	216129	377270	07-Dec	10:26:46	10:57:44	00:30:59	100
4	216129	377270	08-Dec	10:27:09	10:58:15	00:31:06	100
4	216129	377270	09-Dec	10:27:34	10:58:45	00:31:12	100
4	216129	377270	10-Dec	10:27:59	10:59:15	00:31:16	100
4	216129	377270	11-Dec	10:28:27	10:59:44	00:31:18	100
4	216129	377270	12-Dec	10:28:55	11:00:13	00:31:19	100
4	216129	377270	13-Dec	10:29:23	11:00:42	00:31:19	100
4	216129	377270	14-Dec	10:29:52	11:01:11	00:31:18	100
4	216129	377270	15-Dec	10:30:22	11:01:40	00:31:18	100
4	216129	377270	16-Dec	10:30:52	11:02:08	00:31:16	100
4	216129	377270	17-Dec	10:31:22	11:02:37	00:31:15	100
4	216129	377270	18-Dec	10:31:52	11:03:07	00:31:14	100
4	216129	377270	19-Dec	10:32:22	11:03:36	00:31:13	100
4	216129	377270	20-Dec	10:32:53	11:04:05	00:31:13	100
4	216129	377270	21-Dec	10:33:22	11:04:35	00:31:13	100
4	216129	377270	22-Dec	10:33:52	11:05:05	00:31:13	100
4	216129	377270	23-Dec	10:34:22	11:05:35	00:31:13	100
4	216129	377270	24-Dec	10:34:51	11:06:05	00:31:14	100

4	216129	377270	25-Dec	10:35:20	11:06:35	00:31:15	100
4	216129	377270	26-Dec	10:35:49	11:07:05	00:31:16	100
4	216129	377270	27-Dec	10:36:18	11:07:35	00:31:17	100
4	216129	377270	28-Dec	10:36:46	11:08:05	00:31:18	100
4	216129	377270	29-Dec	10:37:15	11:08:34	00:31:19	100
4	216129	377270	30-Dec	10:37:44	11:09:02	00:31:19	100
4	216129	377270	31-Dec	10:38:12	11:09:30	00:31:18	100

House Easting Northing  
10 215548 377173

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
3	216382	377409	20-Apr	05:45:50	05:49:27	00:03:37	74.44
3	216382	377409	21-Apr	05:43:16	05:55:47	00:12:32	100
3	216382	377409	22-Apr	05:40:47	06:01:42	00:20:55	100
3	216382	377409	23-Apr	05:38:48	06:02:40	00:23:52	100
3	216382	377409	24-Apr	05:37:14	06:03:22	00:26:09	100
3	216382	377409	25-Apr	05:35:59	06:03:52	00:27:53	100
3	216382	377409	26-Apr	05:35:01	06:04:13	00:29:12	100
3	216382	377409	27-Apr	05:34:14	06:04:24	00:30:11	100
3	216382	377409	28-Apr	05:33:37	06:04:29	00:30:52	100
3	216382	377409	29-Apr	05:33:09	06:04:26	00:31:16	100
3	216382	377409	30-Apr	05:32:50	06:04:16	00:31:26	100
3	216382	377409	01-May	05:32:38	06:04:00	00:31:22	100
3	216382	377409	02-May	05:32:34	06:03:38	00:31:04	100
3	216382	377409	03-May	05:32:37	06:03:09	00:30:32	100
3	216382	377409	04-May	05:32:48	06:02:33	00:29:46	100
3	216382	377409	05-May	05:33:05	06:01:50	00:28:44	100
3	216382	377409	06-May	05:33:31	06:00:58	00:27:27	100
3	216382	377409	07-May	05:34:05	05:59:55	00:25:50	100
3	216382	377409	08-May	05:34:48	05:58:38	00:23:50	100
3	216382	377409	09-May	05:35:41	05:57:13	00:21:32	100
3	216382	377409	10-May	05:36:49	05:55:30	00:18:42	100
3	216382	377409	11-May	05:38:15	05:53:58	00:15:44	100
3	216382	377409	12-May	05:40:13	05:52:02	00:11:50	53.51
3	216382	377409	13-May	05:43:53	05:48:34	00:04:41	6.98
3	216382	377409	30-Jul	05:51:58	06:00:32	00:08:34	26.88
3	216382	377409	31-Jul	05:49:20	06:02:57	00:13:37	72.36
3	216382	377409	01-Aug	05:47:34	06:04:32	00:16:59	100
3	216382	377409	02-Aug	05:46:11	06:06:05	00:19:54	100
3	216382	377409	03-Aug	05:45:02	06:07:30	00:22:28	100
3	216382	377409	04-Aug	05:44:05	06:08:44	00:24:39	100
3	216382	377409	05-Aug	05:43:17	06:09:45	00:26:28	100
3	216382	377409	06-Aug	05:42:35	06:10:32	00:27:57	100

3	216382	377409	07-Aug	05:42:01	06:11:09	00:29:08	100
3	216382	377409	08-Aug	05:41:33	06:11:36	00:30:03	100
3	216382	377409	09-Aug	05:41:11	06:11:55	00:30:44	100
3	216382	377409	10-Aug	05:40:55	06:12:06	00:31:12	100
3	216382	377409	11-Aug	05:40:44	06:12:10	00:31:26	100
3	216382	377409	12-Aug	05:40:40	06:12:06	00:31:26	100
3	216382	377409	13-Aug	05:40:43	06:11:55	00:31:12	100
3	216382	377409	14-Aug	05:40:53	06:11:36	00:30:44	100
3	216382	377409	15-Aug	05:41:10	06:11:10	00:29:59	100
3	216382	377409	16-Aug	05:41:38	06:10:34	00:28:57	100
3	216382	377409	17-Aug	05:42:16	06:09:49	00:27:33	100
3	216382	377409	18-Aug	05:43:09	06:08:53	00:25:44	100
3	216382	377409	19-Aug	05:44:22	06:07:44	00:23:23	100
3	216382	377409	20-Aug	05:45:58	06:05:30	00:19:32	98.41
3	216382	377409	21-Aug	05:47:59	05:59:07	00:11:08	98.45
3	216382	377409	22-Aug	05:50:10	05:52:16	00:02:06	64.19
4	216129	377270	13-Apr	06:23:27	06:27:32	00:04:05	5.17
4	216129	377270	14-Apr	06:17:44	06:32:45	00:15:01	72.54
4	216129	377270	15-Apr	06:14:46	06:35:11	00:20:25	100
4	216129	377270	16-Apr	06:12:18	06:36:53	00:24:36	100
4	216129	377270	17-Apr	06:09:45	06:38:10	00:28:25	100
4	216129	377270	18-Apr	06:07:31	06:39:10	00:31:39	100
4	216129	377270	19-Apr	06:05:42	06:39:59	00:34:17	100
4	216129	377270	20-Apr	06:04:06	06:40:38	00:36:32	100
4	216129	377270	21-Apr	06:02:45	06:41:09	00:38:23	100
4	216129	377270	22-Apr	06:01:37	06:41:31	00:39:54	100
4	216129	377270	23-Apr	06:00:39	06:41:47	00:41:08	100
4	216129	377270	24-Apr	05:59:50	06:41:57	00:42:07	100
4	216129	377270	25-Apr	05:59:09	06:42:01	00:42:52	100
4	216129	377270	26-Apr	05:58:35	06:41:59	00:43:24	100
4	216129	377270	27-Apr	05:58:08	06:41:53	00:43:45	100
4	216129	377270	28-Apr	05:57:47	06:41:42	00:43:55	100
4	216129	377270	29-Apr	05:57:32	06:41:27	00:43:54	100
4	216129	377270	30-Apr	05:57:23	06:41:06	00:43:43	100
4	216129	377270	01-May	05:57:20	06:40:42	00:43:22	100
4	216129	377270	02-May	05:57:22	06:40:12	00:42:51	100
4	216129	377270	03-May	05:57:29	06:39:38	00:42:09	100
4	216129	377270	04-May	05:57:42	06:38:59	00:41:17	100
4	216129	377270	05-May	05:57:59	06:38:14	00:40:15	100
4	216129	377270	06-May	05:58:23	06:37:24	00:39:01	100
4	216129	377270	07-May	05:58:53	06:36:27	00:37:34	100
4	216129	377270	08-May	05:59:28	06:35:22	00:35:54	100
4	216129	377270	09-May	06:00:10	06:34:16	00:34:06	100
4	216129	377270	10-May	06:00:58	06:33:05	00:32:07	100
4	216129	377270	11-May	06:01:54	06:31:43	00:29:49	100

4	216129	377270	12-May	06:02:57	06:30:29	00:27:32	100
4	216129	377270	13-May	06:04:10	06:29:17	00:25:07	100
4	216129	377270	14-May	06:05:37	06:27:54	00:22:17	100
4	216129	377270	15-May	06:07:22	06:26:14	00:18:52	96.63
4	216129	377270	16-May	06:09:38	06:24:04	00:14:26	53.94
4	216129	377270	17-May	06:13:20	06:20:34	00:07:14	11.06
4	216129	377270	26-Jul	06:21:18	06:32:47	00:11:29	32.85
4	216129	377270	27-Jul	06:18:35	06:35:23	00:16:47	74.49
4	216129	377270	28-Jul	06:16:38	06:37:14	00:20:37	100
4	216129	377270	29-Jul	06:15:02	06:38:43	00:23:41	100
4	216129	377270	30-Jul	06:13:40	06:39:57	00:26:17	100
4	216129	377270	31-Jul	06:12:29	06:41:03	00:28:35	100
4	216129	377270	01-Aug	06:11:25	06:42:18	00:30:53	100
4	216129	377270	02-Aug	06:10:27	06:43:29	00:33:02	100
4	216129	377270	03-Aug	06:09:34	06:44:28	00:34:53	100
4	216129	377270	04-Aug	06:08:47	06:45:26	00:36:39	100
4	216129	377270	05-Aug	06:08:05	06:46:17	00:38:12	100
4	216129	377270	06-Aug	06:07:28	06:47:00	00:39:32	100
4	216129	377270	07-Aug	06:06:55	06:47:36	00:40:41	100
4	216129	377270	08-Aug	06:06:26	06:48:04	00:41:39	100
4	216129	377270	09-Aug	06:06:01	06:48:27	00:42:26	100
4	216129	377270	10-Aug	06:05:40	06:48:44	00:43:04	100
4	216129	377270	11-Aug	06:05:23	06:48:55	00:43:31	100
4	216129	377270	12-Aug	06:05:11	06:49:00	00:43:49	100
4	216129	377270	13-Aug	06:05:03	06:48:59	00:43:57	100
4	216129	377270	14-Aug	06:04:59	06:48:54	00:43:54	100
4	216129	377270	15-Aug	06:05:01	06:48:43	00:43:41	100
4	216129	377270	16-Aug	06:05:08	06:48:26	00:43:18	100
4	216129	377270	17-Aug	06:05:20	06:48:03	00:42:42	100
4	216129	377270	18-Aug	06:05:39	06:47:33	00:41:54	100
4	216129	377270	19-Aug	06:06:04	06:46:57	00:40:53	100
4	216129	377270	20-Aug	06:06:38	06:46:14	00:39:37	100
4	216129	377270	21-Aug	06:07:21	06:45:24	00:38:03	100
4	216129	377270	22-Aug	06:08:15	06:44:24	00:36:09	100
4	216129	377270	23-Aug	06:09:25	06:43:15	00:33:50	100
4	216129	377270	24-Aug	06:10:45	06:41:56	00:31:11	100
4	216129	377270	25-Aug	06:12:33	06:40:24	00:27:51	100
4	216129	377270	26-Aug	06:14:31	06:38:35	00:24:03	100
4	216129	377270	27-Aug	06:16:29	06:36:18	00:19:49	100
4	216129	377270	28-Aug	06:19:00	06:33:13	00:14:12	64.17
5	216152	376797	15-Feb	08:51:05	08:56:12	00:05:07	97.92
5	216152	376797	16-Feb	08:43:51	08:58:11	00:14:20	100
5	216152	376797	17-Feb	08:36:41	08:59:39	00:22:57	100
5	216152	376797	18-Feb	08:34:12	09:00:45	00:26:33	100
5	216152	376797	19-Feb	08:32:49	09:01:36	00:28:48	100

5	216152	376797	20-Feb	08:31:44	09:02:17	00:30:33	100
5	216152	376797	21-Feb	08:30:51	09:02:47	00:31:56	100
5	216152	376797	22-Feb	08:30:08	09:03:06	00:32:58	100
5	216152	376797	23-Feb	08:29:35	09:03:16	00:33:41	100
5	216152	376797	24-Feb	08:29:09	09:03:16	00:34:07	100
5	216152	376797	25-Feb	08:28:52	09:03:08	00:34:15	100
5	216152	376797	26-Feb	08:28:43	09:02:50	00:34:07	100
5	216152	376797	27-Feb	08:28:42	09:02:22	00:33:40	100
5	216152	376797	28-Feb	08:28:50	09:01:46	00:32:57	100
5	216152	376797	29-Feb	08:29:07	09:01:01	00:31:54	100
5	216152	376797	01-Mar	08:29:34	09:00:03	00:30:29	100
5	216152	376797	02-Mar	08:30:12	08:58:54	00:28:41	100
5	216152	376797	03-Mar	08:31:06	08:57:33	00:26:27	100
5	216152	376797	04-Mar	08:32:16	08:55:51	00:23:36	100
5	216152	376797	05-Mar	08:33:53	08:53:39	00:19:47	100
5	216152	376797	06-Mar	08:36:18	08:50:27	00:14:09	76.16
5	216152	376797	07-Mar	08:41:48	08:44:27	00:02:39	2.62
5	216152	376797	06-Oct	08:14:11	08:26:15	00:12:04	55.74
5	216152	376797	07-Oct	08:10:53	08:29:18	00:18:25	100
5	216152	376797	08-Oct	08:08:36	08:31:10	00:22:34	100
5	216152	376797	09-Oct	08:06:50	08:32:29	00:25:38	100
5	216152	376797	10-Oct	08:05:25	08:33:25	00:28:01	100
5	216152	376797	11-Oct	08:04:14	08:34:08	00:29:54	100
5	216152	376797	12-Oct	08:03:16	08:34:43	00:31:27	100
5	216152	376797	13-Oct	08:02:30	08:35:07	00:32:36	100
5	216152	376797	14-Oct	08:01:55	08:35:20	00:33:26	100
5	216152	376797	15-Oct	08:01:28	08:35:27	00:33:59	100
5	216152	376797	16-Oct	08:01:11	08:35:26	00:34:15	100
5	216152	376797	17-Oct	08:01:03	08:35:17	00:34:14	100
5	216152	376797	18-Oct	08:01:04	08:35:00	00:33:56	100
5	216152	376797	19-Oct	08:01:14	08:34:36	00:33:21	100
5	216152	376797	20-Oct	08:01:34	08:34:03	00:32:29	100
5	216152	376797	21-Oct	08:02:05	08:33:22	00:31:17	100
5	216152	376797	22-Oct	08:02:47	08:32:31	00:29:44	100
5	216152	376797	23-Oct	08:03:44	08:31:33	00:27:49	100
5	216152	376797	24-Oct	08:05:40	08:30:23	00:24:43	100
5	216152	376797	25-Oct	08:09:39	08:28:58	00:19:18	100
5	216152	376797	26-Oct	08:16:54	08:27:10	00:10:15	100
5	216152	376797	27-Oct	08:23:42	08:24:42	00:01:00	69.4
6	216007	376491	01-Jan	10:09:18	10:14:41	00:05:24	100
6	216007	376491	02-Jan	10:08:22	10:15:27	00:07:06	100
6	216007	376491	03-Jan	10:07:17	10:16:13	00:08:57	100
6	216007	376491	04-Jan	10:06:03	10:16:59	00:10:56	100
6	216007	376491	05-Jan	10:04:39	10:17:44	00:13:05	100
6	216007	376491	06-Jan	10:03:07	10:18:28	00:15:22	100

6	216007	376491	07-Jan	10:01:25	10:19:12	00:17:47	100
6	216007	376491	08-Jan	09:59:32	10:19:54	00:20:22	100
6	216007	376491	09-Jan	09:57:30	10:20:35	00:23:05	100
6	216007	376491	10-Jan	09:55:17	10:21:15	00:25:57	100
6	216007	376491	11-Jan	09:52:59	10:21:52	00:28:53	100
6	216007	376491	12-Jan	09:52:24	10:22:28	00:30:05	100
6	216007	376491	13-Jan	09:52:05	10:23:02	00:30:57	100
6	216007	376491	14-Jan	09:52:17	10:23:34	00:31:17	100
6	216007	376491	15-Jan	09:52:30	10:24:03	00:31:32	100
6	216007	376491	16-Jan	09:52:45	10:24:29	00:31:43	100
6	216007	376491	17-Jan	09:53:02	10:24:51	00:31:49	100
6	216007	376491	18-Jan	09:53:21	10:25:11	00:31:50	100
6	216007	376491	19-Jan	09:53:42	10:25:26	00:31:44	100
6	216007	376491	20-Jan	09:54:06	10:25:37	00:31:32	100
6	216007	376491	21-Jan	09:54:32	10:25:44	00:31:12	100
6	216007	376491	22-Jan	09:55:03	10:25:46	00:30:44	100
6	216007	376491	23-Jan	09:55:37	10:25:43	00:30:06	100
6	216007	376491	24-Jan	09:56:15	10:25:34	00:29:19	100
6	216007	376491	25-Jan	09:56:58	10:25:18	00:28:19	100
6	216007	376491	26-Jan	09:57:48	10:24:54	00:27:06	100
6	216007	376491	27-Jan	09:58:45	10:24:21	00:25:36	100
6	216007	376491	28-Jan	09:59:51	10:23:36	00:23:45	100
6	216007	376491	29-Jan	10:01:10	10:22:36	00:21:26	100
6	216007	376491	30-Jan	10:02:47	10:21:15	00:18:27	100
6	216007	376491	31-Jan	10:04:56	10:19:13	00:14:17	75.1
6	216007	376491	01-Feb	10:08:27	10:15:52	00:07:25	21.72
6	216007	376491	10-Nov	09:37:17	09:47:53	00:10:36	43.06
6	216007	376491	11-Nov	09:34:49	09:50:56	00:16:08	95.28
6	216007	376491	12-Nov	09:33:13	09:52:55	00:19:42	100
6	216007	376491	13-Nov	09:32:03	09:54:25	00:22:22	100
6	216007	376491	14-Nov	09:31:10	09:55:39	00:24:28	100
6	216007	376491	15-Nov	09:30:30	09:56:41	00:26:10	100
6	216007	376491	16-Nov	09:30:00	09:57:34	00:27:33	100
6	216007	376491	17-Nov	09:29:39	09:58:20	00:28:41	100
6	216007	376491	18-Nov	09:29:24	09:59:00	00:29:36	100
6	216007	376491	19-Nov	09:29:16	09:59:36	00:30:20	100
6	216007	376491	20-Nov	09:29:14	10:00:08	00:30:54	100
6	216007	376491	21-Nov	09:29:17	10:00:36	00:31:19	100
6	216007	376491	22-Nov	09:29:25	10:01:01	00:31:36	100
6	216007	376491	23-Nov	09:29:37	10:01:24	00:31:47	100
6	216007	376491	24-Nov	09:29:53	10:01:44	00:31:51	100
6	216007	376491	25-Nov	09:30:13	10:02:02	00:31:49	100
6	216007	376491	26-Nov	09:30:36	10:02:18	00:31:41	100
6	216007	376491	27-Nov	09:31:03	10:02:32	00:31:29	100
6	216007	376491	28-Nov	09:31:32	10:02:45	00:31:12	100
6	216007	376491	29-Nov	09:32:05	10:02:56	00:30:52	100

6	216007	376491	30-Nov	09:33:27	10:03:07	00:29:40	100
6	216007	376491	01-Dec	09:35:00	10:03:17	00:28:16	100
6	216007	376491	02-Dec	09:38:08	10:03:26	00:25:18	100
6	216007	376491	03-Dec	09:41:07	10:03:35	00:22:28	100
6	216007	376491	04-Dec	09:43:56	10:03:44	00:19:48	100
6	216007	376491	05-Dec	09:46:37	10:03:52	00:17:15	100
6	216007	376491	06-Dec	09:49:09	10:04:01	00:14:52	100
6	216007	376491	07-Dec	09:51:32	10:04:09	00:12:37	100
6	216007	376491	08-Dec	09:53:46	10:04:17	00:10:31	100
6	216007	376491	09-Dec	09:55:53	10:04:26	00:08:33	100
6	216007	376491	10-Dec	09:57:51	10:04:35	00:06:45	100
6	216007	376491	11-Dec	09:59:41	10:04:45	00:05:04	100
6	216007	376491	12-Dec	10:01:23	10:04:56	00:03:33	100
6	216007	376491	13-Dec	10:02:58	10:05:09	00:02:11	100
6	216007	376491	14-Dec	10:05:03	10:05:08	00:00:05	100
6	216007	376491	14-Dec	10:05:09	10:05:22	00:00:13	100
6	216007	376491	28-Dec	10:11:59	10:12:01	00:00:02	100
6	216007	376491	28-Dec	10:12:06	10:12:16	00:00:10	100
6	216007	376491	29-Dec	10:10:53	10:12:59	00:02:07	100
6	216007	376491	30-Dec	10:10:16	10:13:45	00:03:29	100
6	216007	376491	31-Dec	10:09:30	10:14:30	00:05:00	100

14	215389	376405	01-Jan	13:11:48	13:24:35	00:12:47	38.61
14	215389	376405	02-Jan	13:13:25	13:24:03	00:10:39	32.4
14	215389	376405	03-Jan	13:15:24	13:23:04	00:07:41	14.82
14	215389	376405	08-Dec	13:04:33	13:09:44	00:05:12	5.15
14	215389	376405	09-Dec	13:02:51	13:12:08	00:09:17	23.39
14	215389	376405	10-Dec	13:02:03	13:13:46	00:11:43	30.28
14	215389	376405	11-Dec	13:01:30	13:15:06	00:13:37	45.65
14	215389	376405	12-Dec	13:01:08	13:16:16	00:15:08	50.74
14	215389	376405	13-Dec	13:00:57	13:17:17	00:16:20	63.2
14	215389	376405	14-Dec	13:00:54	13:18:12	00:17:18	74.2
14	215389	376405	15-Dec	13:00:58	13:19:03	00:18:05	83.73
14	215389	376405	16-Dec	13:01:07	13:19:50	00:18:42	91.78
14	215389	376405	17-Dec	13:01:21	13:20:33	00:19:11	98.35
14	215389	376405	18-Dec	13:01:39	13:21:12	00:19:33	100
14	215389	376405	19-Dec	13:02:01	13:21:49	00:19:48	100
14	215389	376405	20-Dec	13:02:26	13:22:23	00:19:56	100
14	215389	376405	21-Dec	13:02:55	13:22:54	00:19:59	100
14	215389	376405	22-Dec	13:03:27	13:23:22	00:19:55	100
14	215389	376405	23-Dec	13:04:02	13:23:47	00:19:45	100
14	215389	376405	24-Dec	13:04:40	13:24:09	00:19:29	100
14	215389	376405	25-Dec	13:05:22	13:24:28	00:19:06	97.12
14	215389	376405	26-Dec	13:06:08	13:24:43	00:18:35	90.23
14	215389	376405	27-Dec	13:06:59	13:24:54	00:17:56	81.85
14	215389	376405	28-Dec	13:07:54	13:25:01	00:17:07	71.98

14	215389	376405	29-Dec	13:08:56	13:25:02	00:16:05	60.62
14	215389	376405	30-Dec	13:10:07	13:24:56	00:14:49	47.79
14	215389	376405	31-Dec	13:11:27	13:24:41	00:13:14	42.3
15	215537	376804	01-Jan	11:59:57	12:58:24	00:58:27	100
15	215537	376804	02-Jan	12:00:19	12:58:59	00:58:40	100
15	215537	376804	03-Jan	12:00:41	12:59:35	00:58:54	100
15	215537	376804	04-Jan	12:01:02	13:00:10	00:59:08	100
15	215537	376804	05-Jan	12:01:23	13:00:44	00:59:21	100
15	215537	376804	06-Jan	12:01:44	13:01:19	00:59:35	100
15	215537	376804	07-Jan	12:02:04	13:01:52	00:59:48	100
15	215537	376804	08-Jan	12:02:24	13:02:26	01:00:01	100
15	215537	376804	09-Jan	12:02:44	13:02:58	01:00:14	100
15	215537	376804	10-Jan	12:03:04	13:03:29	01:00:25	100
15	215537	376804	11-Jan	12:03:24	13:03:59	01:00:35	100
15	215537	376804	12-Jan	12:03:45	13:04:28	01:00:43	100
15	215537	376804	13-Jan	12:04:05	13:04:56	01:00:50	100
15	215537	376804	14-Jan	12:04:26	13:05:22	01:00:56	100
15	215537	376804	15-Jan	12:04:47	13:05:46	01:00:59	100
15	215537	376804	16-Jan	12:05:09	13:06:08	01:00:59	100
15	215537	376804	17-Jan	12:05:32	13:06:29	01:00:57	100
15	215537	376804	18-Jan	12:05:55	13:06:47	01:00:53	100
15	215537	376804	19-Jan	12:06:19	13:07:04	01:00:45	100
15	215537	376804	20-Jan	12:06:44	13:07:18	01:00:34	100
15	215537	376804	21-Jan	12:07:10	13:07:30	01:00:20	100
15	215537	376804	22-Jan	12:07:38	13:07:40	01:00:02	100
15	215537	376804	23-Jan	12:08:06	13:07:47	00:59:40	100
15	215537	376804	24-Jan	12:08:34	13:07:51	00:59:17	100
15	215537	376804	25-Jan	12:09:03	13:07:52	00:58:48	100
15	215537	376804	26-Jan	12:09:34	13:07:49	00:58:15	100
15	215537	376804	27-Jan	12:10:08	13:08:13	00:58:05	100
15	215537	376804	28-Jan	12:10:43	13:11:30	01:00:47	100
15	215537	376804	29-Jan	12:11:21	13:11:16	00:59:56	100
15	215537	376804	30-Jan	12:12:01	13:10:58	00:58:57	100
15	215537	376804	31-Jan	12:12:45	13:10:36	00:57:51	100
15	215537	376804	01-Feb	12:13:32	13:10:09	00:56:37	100
15	215537	376804	02-Feb	12:14:23	13:09:36	00:55:14	100
15	215537	376804	03-Feb	12:15:18	13:08:58	00:53:41	100
15	215537	376804	04-Feb	12:16:18	13:08:14	00:51:56	100
15	215537	376804	05-Feb	12:17:24	13:07:23	00:49:59	100
15	215537	376804	06-Feb	12:18:36	13:06:24	00:47:48	100
15	215537	376804	07-Feb	12:19:57	13:05:17	00:45:20	100
15	215537	376804	08-Feb	12:21:27	13:03:59	00:42:32	100
15	215537	376804	09-Feb	12:23:10	13:02:28	00:39:19	100
15	215537	376804	10-Feb	12:25:09	13:00:42	00:35:33	100
15	215537	376804	11-Feb	12:27:33	12:58:35	00:31:02	100

15	215537	376804	12-Feb	12:30:18	12:55:56	00:25:37	100
15	215537	376804	13-Feb	12:34:10	12:52:16	00:18:06	49.7
15	215537	376804	28-Oct	12:05:06	12:20:39	00:15:34	33.76
15	215537	376804	29-Oct	12:00:40	12:24:38	00:23:58	96.22
15	215537	376804	30-Oct	11:57:41	12:27:23	00:29:42	100
15	215537	376804	31-Oct	11:55:13	12:29:35	00:34:22	100
15	215537	376804	01-Nov	11:53:08	12:31:25	00:38:16	100
15	215537	376804	02-Nov	11:51:23	12:32:59	00:41:36	100
15	215537	376804	03-Nov	11:49:53	12:34:23	00:44:30	100
15	215537	376804	04-Nov	11:48:35	12:35:37	00:47:02	100
15	215537	376804	05-Nov	11:47:27	12:36:44	00:49:17	100
15	215537	376804	06-Nov	11:46:28	12:37:45	00:51:17	100
15	215537	376804	07-Nov	11:45:36	12:38:40	00:53:05	100
15	215537	376804	08-Nov	11:44:50	12:39:31	00:54:41	100
15	215537	376804	09-Nov	11:44:11	12:40:18	00:56:07	100
15	215537	376804	10-Nov	11:43:37	12:41:00	00:57:23	100
15	215537	376804	11-Nov	11:43:08	12:41:40	00:58:32	100
15	215537	376804	12-Nov	11:42:44	12:42:17	00:59:33	100
15	215537	376804	13-Nov	11:42:25	12:42:51	01:00:26	100
15	215537	376804	14-Nov	11:42:09	12:41:16	00:59:06	100
15	215537	376804	15-Nov	11:41:58	12:39:56	00:57:59	100
15	215537	376804	16-Nov	11:41:50	12:40:24	00:58:34	100
15	215537	376804	17-Nov	11:41:46	12:40:50	00:59:05	100
15	215537	376804	18-Nov	11:41:45	12:41:15	00:59:30	100
15	215537	376804	19-Nov	11:41:46	12:41:38	00:59:52	100
15	215537	376804	20-Nov	11:41:48	12:42:00	01:00:12	100
15	215537	376804	21-Nov	11:41:53	12:42:21	01:00:28	100
15	215537	376804	22-Nov	11:42:01	12:42:41	01:00:40	100
15	215537	376804	23-Nov	11:42:12	12:43:01	01:00:49	100
15	215537	376804	24-Nov	11:42:25	12:43:21	01:00:56	100
15	215537	376804	25-Nov	11:42:41	12:43:40	01:00:59	100
15	215537	376804	26-Nov	11:42:58	12:43:58	01:00:59	100
15	215537	376804	27-Nov	11:43:18	12:44:16	01:00:58	100
15	215537	376804	28-Nov	11:43:39	12:44:33	01:00:54	100
15	215537	376804	29-Nov	11:44:02	12:44:50	01:00:48	100
15	215537	376804	30-Nov	11:44:27	12:45:07	01:00:40	100
15	215537	376804	01-Dec	11:44:54	12:45:24	01:00:31	100
15	215537	376804	02-Dec	11:45:21	12:45:41	01:00:20	100
15	215537	376804	03-Dec	11:45:50	12:45:58	01:00:09	100
15	215537	376804	04-Dec	11:46:20	12:46:16	00:59:56	100
15	215537	376804	05-Dec	11:46:50	12:46:33	00:59:43	100
15	215537	376804	06-Dec	11:47:22	12:46:51	00:59:29	100
15	215537	376804	07-Dec	11:47:54	12:47:10	00:59:16	100
15	215537	376804	08-Dec	11:48:27	12:47:29	00:59:02	100
15	215537	376804	09-Dec	11:48:59	12:47:48	00:58:48	100
15	215537	376804	10-Dec	11:49:33	12:48:08	00:58:35	100

15	215537	376804	11-Dec	11:50:06	12:48:29	00:58:23	100
15	215537	376804	12-Dec	11:50:40	12:48:50	00:58:11	100
15	215537	376804	13-Dec	11:51:13	12:49:13	00:57:59	100
15	215537	376804	14-Dec	11:51:47	12:49:36	00:57:49	100
15	215537	376804	15-Dec	11:52:20	12:49:59	00:57:40	100
15	215537	376804	16-Dec	11:52:52	12:50:25	00:57:32	100
15	215537	376804	17-Dec	11:53:25	12:50:50	00:57:26	100
15	215537	376804	18-Dec	11:53:57	12:51:17	00:57:21	100
15	215537	376804	19-Dec	11:54:28	12:51:45	00:57:17	100
15	215537	376804	20-Dec	11:54:59	12:52:13	00:57:15	100
15	215537	376804	21-Dec	11:55:29	12:52:43	00:57:14	100
15	215537	376804	22-Dec	11:55:58	12:53:13	00:57:15	100
15	215537	376804	23-Dec	11:56:27	12:53:44	00:57:17	100
15	215537	376804	24-Dec	11:56:55	12:54:16	00:57:21	100
15	215537	376804	25-Dec	11:57:22	12:54:49	00:57:27	100
15	215537	376804	26-Dec	11:57:49	12:55:22	00:57:33	100
15	215537	376804	27-Dec	11:58:15	12:55:56	00:57:41	100
15	215537	376804	28-Dec	11:58:40	12:56:31	00:57:51	100
15	215537	376804	29-Dec	11:59:05	12:57:05	00:58:01	100
15	215537	376804	30-Dec	11:59:28	12:57:41	00:58:12	100
15	215537	376804	31-Dec	11:59:51	12:58:16	00:58:24	100

House Easting Northing  
11 215410 377174

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	30-May	04:31:37	04:34:30	00:02:54	3.21
2	216143	377705	31-May	04:28:50	04:37:32	00:08:42	29.72
2	216143	377705	01-Jun	04:27:25	04:39:11	00:11:46	43.35
2	216143	377705	02-Jun	04:26:20	04:40:26	00:14:05	67.47
2	216143	377705	03-Jun	04:25:26	04:41:27	00:16:01	44.85
2	216143	377705	04-Jun	04:24:29	04:42:19	00:17:50	66.55
2	216143	377705	05-Jun	04:23:38	04:43:05	00:19:27	63.65
2	216143	377705	06-Jun	04:22:58	04:43:46	00:20:48	82.91
2	216143	377705	07-Jun	04:22:26	04:44:23	00:21:57	100
2	216143	377705	08-Jun	04:22:02	04:44:56	00:22:54	100
2	216143	377705	09-Jun	04:21:43	04:45:27	00:23:44	100
2	216143	377705	10-Jun	04:21:29	04:45:55	00:24:25	100
2	216143	377705	11-Jun	04:21:20	04:46:21	00:25:01	100
2	216143	377705	12-Jun	04:21:14	04:46:46	00:25:32	100
2	216143	377705	13-Jun	04:21:10	04:47:08	00:25:58	100
2	216143	377705	14-Jun	04:21:10	04:47:29	00:26:20	100
2	216143	377705	15-Jun	04:21:11	04:47:49	00:26:38	100
2	216143	377705	16-Jun	04:21:15	04:48:08	00:26:53	100

2	216143	377705	17-Jun	04:21:21	04:48:26	00:27:04	100
2	216143	377705	18-Jun	04:21:29	04:48:42	00:27:13	100
2	216143	377705	19-Jun	04:21:38	04:48:58	00:27:20	100
2	216143	377705	20-Jun	04:21:49	04:49:12	00:27:23	100
2	216143	377705	21-Jun	04:22:02	04:49:25	00:27:24	100
2	216143	377705	22-Jun	04:22:16	04:49:37	00:27:22	100
2	216143	377705	23-Jun	04:22:31	04:49:48	00:27:17	100
2	216143	377705	24-Jun	04:22:49	04:49:58	00:27:09	100
2	216143	377705	25-Jun	04:23:07	04:50:06	00:26:59	100
2	216143	377705	26-Jun	04:23:28	04:50:14	00:26:46	100
2	216143	377705	27-Jun	04:23:50	04:50:20	00:26:30	100
2	216143	377705	28-Jun	04:24:15	04:50:24	00:26:10	100
2	216143	377705	29-Jun	04:24:41	04:50:27	00:25:46	100
2	216143	377705	30-Jun	04:25:10	04:50:28	00:25:18	100
2	216143	377705	01-Jul	04:25:42	04:50:27	00:24:45	100
2	216143	377705	02-Jul	04:26:17	04:50:23	00:24:06	100
2	216143	377705	03-Jul	04:26:55	04:50:17	00:23:21	100
2	216143	377705	04-Jul	04:27:39	04:50:07	00:22:28	100
2	216143	377705	05-Jul	04:28:28	04:49:54	00:21:26	92.48
2	216143	377705	06-Jul	04:29:25	04:49:37	00:20:12	73.97
2	216143	377705	07-Jul	04:30:31	04:49:15	00:18:44	54.26
2	216143	377705	08-Jul	04:31:43	04:48:46	00:17:03	56.64
2	216143	377705	09-Jul	04:33:02	04:48:09	00:15:07	79.89
2	216143	377705	10-Jul	04:34:14	04:47:21	00:13:07	56.59
2	216143	377705	11-Jul	04:35:45	04:46:16	00:10:31	43.75
2	216143	377705	12-Jul	04:37:44	04:44:34	00:06:50	18.1
4	216129	377270	11-Apr	06:22:41	06:28:07	00:05:26	10.85
4	216129	377270	12-Apr	06:17:58	06:32:18	00:14:20	79.18
4	216129	377270	13-Apr	06:15:06	06:34:24	00:19:18	100
4	216129	377270	14-Apr	06:12:43	06:35:50	00:23:07	100
4	216129	377270	15-Apr	06:10:30	06:36:53	00:26:23	100
4	216129	377270	16-Apr	06:08:43	06:37:42	00:28:59	100
4	216129	377270	17-Apr	06:07:16	06:38:19	00:31:03	100
4	216129	377270	18-Apr	06:06:05	06:38:46	00:32:41	100
4	216129	377270	19-Apr	06:05:06	06:39:03	00:33:57	100
4	216129	377270	20-Apr	06:04:18	06:39:12	00:34:55	100
4	216129	377270	21-Apr	06:03:39	06:39:14	00:35:35	100
4	216129	377270	22-Apr	06:03:08	06:39:09	00:36:01	100
4	216129	377270	23-Apr	06:02:46	06:38:58	00:36:12	100
4	216129	377270	24-Apr	06:02:30	06:38:40	00:36:09	100
4	216129	377270	25-Apr	06:02:22	06:38:16	00:35:53	100
4	216129	377270	26-Apr	06:02:21	06:37:45	00:35:24	100
4	216129	377270	27-Apr	06:02:27	06:37:08	00:34:40	100
4	216129	377270	28-Apr	06:02:41	06:36:23	00:33:42	100
4	216129	377270	29-Apr	06:03:02	06:35:31	00:32:29	100

4	216129	377270	30-Apr	06:03:31	06:34:29	00:30:58	100
4	216129	377270	01-May	06:04:09	06:33:16	00:29:07	100
4	216129	377270	02-May	06:04:57	06:31:49	00:26:52	100
4	216129	377270	03-May	06:05:56	06:30:04	00:24:07	100
4	216129	377270	04-May	06:07:11	06:28:38	00:21:28	100
4	216129	377270	05-May	06:08:46	06:26:59	00:18:12	100
4	216129	377270	06-May	06:10:57	06:24:48	00:13:51	67.03
4	216129	377270	07-May	06:14:28	06:21:16	00:06:49	15.78
4	216129	377270	05-Aug	06:22:11	06:32:28	00:10:17	36.33
4	216129	377270	06-Aug	06:19:15	06:35:00	00:15:46	87.12
4	216129	377270	07-Aug	06:17:10	06:36:43	00:19:34	100
4	216129	377270	08-Aug	06:15:31	06:38:01	00:22:30	100
4	216129	377270	09-Aug	06:14:09	06:39:20	00:25:11	100
4	216129	377270	10-Aug	06:12:59	06:40:43	00:27:44	100
4	216129	377270	11-Aug	06:11:59	06:41:47	00:29:48	100
4	216129	377270	12-Aug	06:11:07	06:42:38	00:31:31	100
4	216129	377270	13-Aug	06:10:22	06:43:17	00:32:55	100
4	216129	377270	14-Aug	06:09:44	06:43:46	00:34:02	100
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4	216129	377270	16-Aug	06:08:46	06:44:20	00:35:34	100
4	216129	377270	17-Aug	06:08:26	06:44:26	00:35:59	100
4	216129	377270	18-Aug	06:08:11	06:44:24	00:36:12	100
4	216129	377270	19-Aug	06:08:03	06:44:15	00:36:12	100
4	216129	377270	20-Aug	06:08:02	06:43:59	00:35:58	100
4	216129	377270	21-Aug	06:08:07	06:43:36	00:35:29	100
4	216129	377270	22-Aug	06:08:20	06:43:05	00:34:46	100
4	216129	377270	23-Aug	06:08:41	06:42:26	00:33:46	100
4	216129	377270	24-Aug	06:09:11	06:41:38	00:32:27	100
4	216129	377270	25-Aug	06:09:54	06:40:40	00:30:47	100
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4	216129	377270	27-Aug	06:12:09	06:38:10	00:26:01	100
4	216129	377270	28-Aug	06:13:51	06:36:33	00:22:42	100
4	216129	377270	29-Aug	06:15:42	06:34:32	00:18:50	95.85
4	216129	377270	30-Aug	06:17:59	06:31:48	00:13:48	72.57
4	216129	377270	31-Aug	06:22:38	06:26:34	00:03:56	5.62
5	216152	376797	21-Feb	08:31:16	08:36:31	00:05:15	75.54
5	216152	376797	22-Feb	08:22:23	08:38:38	00:16:15	100
5	216152	376797	23-Feb	08:18:41	08:40:03	00:21:22	100
5	216152	376797	24-Feb	08:17:04	08:41:05	00:24:01	100
5	216152	376797	25-Feb	08:15:48	08:41:50	00:26:03	100
5	216152	376797	26-Feb	08:14:48	08:42:23	00:27:36	100
5	216152	376797	27-Feb	08:14:01	08:42:43	00:28:43	100
5	216152	376797	28-Feb	08:13:25	08:42:52	00:29:27	100
5	216152	376797	29-Feb	08:12:59	08:42:50	00:29:51	100
5	216152	376797	01-Mar	08:12:43	08:42:37	00:29:54	100

5	216152	376797	02-Mar	08:12:37	08:42:13	00:29:36	100
5	216152	376797	03-Mar	08:12:41	08:41:38	00:28:57	100
5	216152	376797	04-Mar	08:12:56	08:40:51	00:27:55	100
5	216152	376797	05-Mar	08:13:23	08:39:49	00:26:26	100
5	216152	376797	06-Mar	08:14:05	08:38:31	00:24:26	100
5	216152	376797	07-Mar	08:15:05	08:36:56	00:21:51	100
5	216152	376797	08-Mar	08:16:33	08:35:04	00:18:32	100
5	216152	376797	09-Mar	08:18:41	08:32:29	00:13:48	74.21
5	216152	376797	10-Mar	08:24:06	08:27:09	00:03:04	3.96
5	216152	376797	03-Oct	07:57:59	08:10:11	00:12:11	55.14
5	216152	376797	04-Oct	07:55:02	08:12:29	00:17:27	100
5	216152	376797	05-Oct	07:52:54	08:13:56	00:21:02	100
5	216152	376797	06-Oct	07:51:16	08:14:59	00:23:44	100
5	216152	376797	07-Oct	07:49:59	08:15:52	00:25:53	100
5	216152	376797	08-Oct	07:48:57	08:16:27	00:27:30	100
5	216152	376797	09-Oct	07:48:09	08:16:48	00:28:39	100
5	216152	376797	10-Oct	07:47:33	08:16:58	00:29:26	100
5	216152	376797	11-Oct	07:47:07	08:16:58	00:29:51	100
5	216152	376797	12-Oct	07:46:52	08:16:48	00:29:55	100
5	216152	376797	13-Oct	07:46:48	08:16:28	00:29:40	100
5	216152	376797	14-Oct	07:46:54	08:15:59	00:29:05	100
5	216152	376797	15-Oct	07:47:12	08:15:21	00:28:09	100
5	216152	376797	16-Oct	07:47:43	08:14:31	00:26:48	100
5	216152	376797	17-Oct	07:48:28	08:13:30	00:25:02	100
5	216152	376797	18-Oct	07:49:33	08:12:17	00:22:44	100
5	216152	376797	19-Oct	07:51:36	08:10:46	00:19:11	100
5	216152	376797	20-Oct	07:57:58	08:08:47	00:10:49	100
6	216007	376491	17-Jan	09:49:55	09:53:31	00:03:36	100
6	216007	376491	18-Jan	09:47:04	09:54:37	00:07:33	100
6	216007	376491	19-Jan	09:44:01	09:55:36	00:11:35	100
6	216007	376491	20-Jan	09:40:47	09:56:29	00:15:42	100
6	216007	376491	21-Jan	09:37:21	09:57:16	00:19:55	100
6	216007	376491	22-Jan	09:33:42	09:57:58	00:24:16	100
6	216007	376491	23-Jan	09:31:31	09:58:36	00:27:06	100
6	216007	376491	24-Jan	09:30:43	09:59:09	00:28:26	100
6	216007	376491	25-Jan	09:30:40	09:59:37	00:28:56	100
6	216007	376491	26-Jan	09:30:42	09:59:59	00:29:17	100
6	216007	376491	27-Jan	09:30:47	10:00:15	00:29:28	100
6	216007	376491	28-Jan	09:30:57	10:00:26	00:29:29	100
6	216007	376491	29-Jan	09:31:12	10:00:30	00:29:18	100
6	216007	376491	30-Jan	09:31:32	10:00:28	00:28:56	100
6	216007	376491	31-Jan	09:31:57	10:00:19	00:28:21	100
6	216007	376491	01-Feb	09:32:29	10:00:01	00:27:32	100
6	216007	376491	02-Feb	09:33:08	09:59:35	00:26:26	100
6	216007	376491	03-Feb	09:33:56	09:58:57	00:25:01	100

6	216007	376491	04-Feb	09:34:54	09:58:07	00:23:13	100
6	216007	376491	05-Feb	09:36:04	09:56:58	00:20:54	100
6	216007	376491	06-Feb	09:37:35	09:55:24	00:17:49	100
6	216007	376491	07-Feb	09:39:40	09:52:56	00:13:16	68.6
6	216007	376491	08-Feb	09:43:33	09:48:22	00:04:49	9.01
6	216007	376491	03-Nov	09:10:49	09:19:57	00:09:08	35.14
6	216007	376491	04-Nov	09:08:12	09:23:42	00:15:30	93.4
6	216007	376491	05-Nov	09:06:32	09:25:46	00:19:14	100
6	216007	376491	06-Nov	09:05:19	09:27:15	00:21:56	100
6	216007	376491	07-Nov	09:04:24	09:28:23	00:23:59	100
6	216007	376491	08-Nov	09:03:41	09:29:19	00:25:37	100
6	216007	376491	09-Nov	09:03:10	09:30:04	00:26:54	100
6	216007	376491	10-Nov	09:02:48	09:30:40	00:27:52	100
6	216007	376491	11-Nov	09:02:34	09:31:10	00:28:36	100
6	216007	376491	12-Nov	09:02:28	09:31:34	00:29:06	100
6	216007	376491	13-Nov	09:02:29	09:31:53	00:29:24	100
6	216007	376491	14-Nov	09:02:36	09:32:07	00:29:30	100
6	216007	376491	15-Nov	09:02:50	09:32:17	00:29:27	100
6	216007	376491	16-Nov	09:03:10	09:32:22	00:29:13	100
6	216007	376491	17-Nov	09:03:35	09:32:24	00:28:49	100
6	216007	376491	18-Nov	09:04:06	09:32:22	00:28:16	100
6	216007	376491	19-Nov	09:05:59	09:32:16	00:26:18	100
6	216007	376491	20-Nov	09:09:01	09:32:07	00:23:06	100
6	216007	376491	21-Nov	09:13:07	09:31:56	00:18:49	100
6	216007	376491	22-Nov	09:17:02	09:31:41	00:14:39	100
6	216007	376491	23-Nov	09:20:48	09:31:22	00:10:35	100
6	216007	376491	24-Nov	09:24:23	09:30:58	00:06:35	100
6	216007	376491	25-Nov	09:27:49	09:30:29	00:02:40	100
14	215389	376405	01-Jan	12:31:46	12:44:21	00:12:35	57.04
14	215389	376405	02-Jan	12:33:10	12:43:53	00:10:43	40.96
14	215389	376405	03-Jan	12:34:55	12:43:04	00:08:09	23.43
14	215389	376405	04-Jan	12:37:40	12:41:14	00:03:34	4.45
14	215389	376405	08-Dec	12:23:49	12:29:51	00:06:02	12.72
14	215389	376405	09-Dec	12:22:36	12:31:57	00:09:22	30.99
14	215389	376405	10-Dec	12:21:57	12:33:30	00:11:34	47.84
14	215389	376405	11-Dec	12:21:34	12:34:48	00:13:14	63.24
14	215389	376405	12-Dec	12:21:20	12:35:55	00:14:36	77.2
14	215389	376405	13-Dec	12:21:13	12:36:56	00:15:42	89.7
14	215389	376405	14-Dec	12:21:14	12:37:50	00:16:36	100
14	215389	376405	15-Dec	12:21:20	12:38:40	00:17:20	100
14	215389	376405	16-Dec	12:21:31	12:39:26	00:17:56	100
14	215389	376405	17-Dec	12:21:46	12:40:09	00:18:23	100
14	215389	376405	18-Dec	12:22:05	12:40:49	00:18:44	100
14	215389	376405	19-Dec	12:22:27	12:41:25	00:18:58	100
14	215389	376405	20-Dec	12:22:53	12:41:59	00:19:06	100

14	215389	376405	21-Dec	12:23:21	12:42:30	00:19:09	100
14	215389	376405	22-Dec	12:23:53	12:42:58	00:19:06	100
14	215389	376405	23-Dec	12:24:27	12:43:24	00:18:56	100
14	215389	376405	24-Dec	12:25:05	12:43:46	00:18:41	100
14	215389	376405	25-Dec	12:25:46	12:44:05	00:18:19	100
14	215389	376405	26-Dec	12:26:30	12:44:21	00:17:50	100
14	215389	376405	27-Dec	12:27:19	12:44:33	00:17:14	100
14	215389	376405	28-Dec	12:28:12	12:44:40	00:16:28	99.09
14	215389	376405	29-Dec	12:29:10	12:44:42	00:15:32	87.78
14	215389	376405	30-Dec	12:30:15	12:44:38	00:14:23	74.98
14	215389	376405	31-Dec	12:31:27	12:44:25	00:12:58	60.72
15	215537	376804	01-Jan	10:53:19	11:35:51	00:42:32	100
15	215537	376804	02-Jan	10:53:30	11:36:36	00:43:07	100
15	215537	376804	03-Jan	10:53:39	11:37:22	00:43:43	100
15	215537	376804	04-Jan	10:53:47	11:38:08	00:44:21	100
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15	215537	376804	06-Jan	10:54:01	11:39:40	00:45:39	100
15	215537	376804	07-Jan	10:54:07	11:40:26	00:46:19	100
15	215537	376804	08-Jan	10:54:12	11:41:12	00:47:00	100
15	215537	376804	09-Jan	10:54:16	11:41:57	00:47:41	100
15	215537	376804	10-Jan	10:54:20	11:42:41	00:48:21	100
15	215537	376804	11-Jan	10:54:24	11:43:25	00:49:01	100
15	215537	376804	12-Jan	10:54:28	11:44:07	00:49:40	100
15	215537	376804	13-Jan	10:54:31	11:44:48	00:50:17	100
15	215537	376804	14-Jan	10:54:35	11:45:28	00:50:53	100
15	215537	376804	15-Jan	10:54:39	11:46:07	00:51:28	100
15	215537	376804	16-Jan	10:54:43	11:46:44	00:52:01	100
15	215537	376804	17-Jan	10:54:48	11:47:19	00:52:31	100
15	215537	376804	18-Jan	10:54:53	11:47:52	00:52:59	100
15	215537	376804	19-Jan	10:54:58	11:48:23	00:53:24	100
15	215537	376804	20-Jan	10:55:05	11:48:52	00:53:47	100
15	215537	376804	21-Jan	10:55:12	11:49:18	00:54:06	100
15	215537	376804	22-Jan	10:55:20	11:49:42	00:54:22	100
15	215537	376804	23-Jan	10:55:30	11:50:05	00:54:35	100
15	215537	376804	24-Jan	10:55:40	11:50:25	00:54:45	100
15	215537	376804	25-Jan	10:55:52	11:50:42	00:54:50	100
15	215537	376804	26-Jan	10:56:05	11:50:56	00:54:51	100
15	215537	376804	27-Jan	10:56:20	11:51:07	00:54:47	100
15	215537	376804	28-Jan	10:56:37	11:51:15	00:54:38	100
15	215537	376804	29-Jan	10:56:55	11:51:19	00:54:24	100
15	215537	376804	30-Jan	10:57:16	11:55:16	00:58:00	100
15	215537	376804	31-Jan	10:57:39	11:55:13	00:57:34	100
15	215537	376804	01-Feb	10:58:04	11:55:06	00:57:02	100
15	215537	376804	02-Feb	10:58:32	11:54:55	00:56:22	100
15	215537	376804	03-Feb	10:59:03	11:54:39	00:55:36	100

15	215537	376804	04-Feb	10:59:37	11:54:19	00:54:41	100
15	215537	376804	05-Feb	11:00:15	11:53:53	00:53:38	100
15	215537	376804	06-Feb	11:00:56	11:53:23	00:52:26	100
15	215537	376804	07-Feb	11:01:42	11:52:46	00:51:04	100
15	215537	376804	08-Feb	11:02:33	11:52:03	00:49:30	100
15	215537	376804	09-Feb	11:03:29	11:51:13	00:47:44	100
15	215537	376804	10-Feb	11:04:32	11:50:16	00:45:43	100
15	215537	376804	11-Feb	11:05:42	11:49:09	00:43:27	100
15	215537	376804	12-Feb	11:07:02	11:47:52	00:40:50	100
15	215537	376804	13-Feb	11:08:33	11:46:22	00:37:50	100
15	215537	376804	14-Feb	11:10:18	11:44:37	00:34:19	100
15	215537	376804	15-Feb	11:12:24	11:42:31	00:30:07	100
15	215537	376804	16-Feb	11:15:03	11:39:52	00:24:50	100
15	215537	376804	17-Feb	11:18:46	11:36:14	00:17:28	61.18
15	215537	376804	24-Oct	10:50:33	11:04:55	00:14:21	41.04
15	215537	376804	25-Oct	10:46:02	11:08:53	00:22:51	100
15	215537	376804	26-Oct	10:43:01	11:11:33	00:28:32	100
15	215537	376804	27-Oct	10:40:40	11:13:39	00:32:59	100
15	215537	376804	28-Oct	10:38:43	11:15:23	00:36:40	100
15	215537	376804	29-Oct	10:37:03	11:16:51	00:39:48	100
15	215537	376804	30-Oct	10:35:38	11:18:08	00:42:31	100
15	215537	376804	31-Oct	10:34:23	11:19:16	00:44:53	100
15	215537	376804	01-Nov	10:33:18	11:20:16	00:46:58	100
15	215537	376804	02-Nov	10:32:21	11:21:10	00:48:49	100
15	215537	376804	03-Nov	10:31:31	11:21:57	00:50:26	100
15	215537	376804	04-Nov	10:30:48	11:22:41	00:51:52	100
15	215537	376804	05-Nov	10:30:11	11:23:19	00:53:08	100
15	215537	376804	06-Nov	10:29:40	11:23:54	00:54:14	100
15	215537	376804	07-Nov	10:29:14	11:24:26	00:55:12	100
15	215537	376804	08-Nov	10:28:53	11:24:54	00:56:02	100
15	215537	376804	09-Nov	10:28:36	11:25:20	00:56:44	100
15	215537	376804	10-Nov	10:28:24	11:25:43	00:57:19	100
15	215537	376804	11-Nov	10:28:16	11:26:04	00:57:48	100
15	215537	376804	12-Nov	10:28:11	11:22:26	00:54:14	100
15	215537	376804	13-Nov	10:28:11	11:22:42	00:54:31	100
15	215537	376804	14-Nov	10:28:14	11:22:57	00:54:43	100
15	215537	376804	15-Nov	10:28:20	11:23:10	00:54:50	100
15	215537	376804	16-Nov	10:28:30	11:23:21	00:54:51	100
15	215537	376804	17-Nov	10:28:43	11:23:32	00:54:49	100
15	215537	376804	18-Nov	10:28:59	11:23:40	00:54:42	100
15	215537	376804	19-Nov	10:29:18	11:23:48	00:54:31	100
15	215537	376804	20-Nov	10:29:39	11:23:55	00:54:16	100
15	215537	376804	21-Nov	10:30:03	11:24:02	00:53:59	100
15	215537	376804	22-Nov	10:30:30	11:24:08	00:53:39	100
15	215537	376804	23-Nov	10:30:59	11:24:14	00:53:15	100
15	215537	376804	24-Nov	10:31:30	11:24:19	00:52:49	100

15	215537	376804	25-Nov	10:32:03	11:24:23	00:52:20	100
15	215537	376804	26-Nov	10:32:38	11:24:27	00:51:49	100
15	215537	376804	27-Nov	10:33:15	11:24:31	00:51:16	100
15	215537	376804	28-Nov	10:33:54	11:24:35	00:50:41	100
15	215537	376804	29-Nov	10:34:34	11:24:38	00:50:04	100
15	215537	376804	30-Nov	10:35:15	11:24:42	00:49:27	100
15	215537	376804	01-Dec	10:35:58	11:24:45	00:48:48	100
15	215537	376804	02-Dec	10:36:41	11:24:49	00:48:08	100
15	215537	376804	03-Dec	10:37:26	11:24:54	00:47:28	100
15	215537	376804	04-Dec	10:38:11	11:24:58	00:46:47	100
15	215537	376804	05-Dec	10:38:57	11:25:03	00:46:07	100
15	215537	376804	06-Dec	10:39:43	11:25:09	00:45:27	100
15	215537	376804	07-Dec	10:40:29	11:25:16	00:44:47	100
15	215537	376804	08-Dec	10:41:15	11:25:24	00:44:09	100
15	215537	376804	09-Dec	10:42:01	11:25:33	00:43:32	100
15	215537	376804	10-Dec	10:42:46	11:25:42	00:42:56	100
15	215537	376804	11-Dec	10:43:31	11:25:54	00:42:23	100
15	215537	376804	12-Dec	10:44:15	11:26:06	00:41:51	100
15	215537	376804	13-Dec	10:44:58	11:26:20	00:41:22	100
15	215537	376804	14-Dec	10:45:41	11:26:36	00:40:55	100
15	215537	376804	15-Dec	10:46:21	11:26:53	00:40:32	100
15	215537	376804	16-Dec	10:47:01	11:27:13	00:40:12	100
15	215537	376804	17-Dec	10:47:39	11:27:34	00:39:55	100
15	215537	376804	18-Dec	10:48:15	11:27:57	00:39:42	100
15	215537	376804	19-Dec	10:48:50	11:28:22	00:39:32	100
15	215537	376804	20-Dec	10:49:22	11:28:49	00:39:26	100
15	215537	376804	21-Dec	10:49:53	11:29:18	00:39:24	100
15	215537	376804	22-Dec	10:50:22	11:29:48	00:39:26	100
15	215537	376804	23-Dec	10:50:49	11:30:21	00:39:32	100
15	215537	376804	24-Dec	10:51:14	11:30:56	00:39:42	100
15	215537	376804	25-Dec	10:51:37	11:31:32	00:39:55	100
15	215537	376804	26-Dec	10:51:58	11:32:10	00:40:12	100
15	215537	376804	27-Dec	10:52:17	11:32:50	00:40:33	100
15	215537	376804	28-Dec	10:52:34	11:33:31	00:40:56	100
15	215537	376804	29-Dec	10:52:50	11:34:13	00:41:23	100
15	215537	376804	30-Dec	10:53:04	11:34:56	00:41:52	100
15	215537	376804	31-Dec	10:53:16	11:35:41	00:42:24	100

House Easting Northing  
12 216965 376456

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
5	216152	376797	01-May	19:16:21	19:25:29	00:09:09	35.69
5	216152	376797	02-May	19:13:41	19:27:58	00:14:16	90.86

5	216152	376797	03-May	19:11:56	19:29:35	00:17:40	100
5	216152	376797	04-May	19:10:36	19:30:48	00:20:12	100
5	216152	376797	05-May	19:09:34	19:31:44	00:22:10	100
5	216152	376797	06-May	19:08:44	19:32:28	00:23:44	100
5	216152	376797	07-May	19:08:04	19:33:03	00:24:58	100
5	216152	376797	08-May	19:07:33	19:33:29	00:25:56	100
5	216152	376797	09-May	19:07:10	19:33:50	00:26:40	100
5	216152	376797	10-May	19:06:53	19:34:04	00:27:12	100
5	216152	376797	11-May	19:06:42	19:34:14	00:27:32	100
5	216152	376797	12-May	19:06:36	19:34:18	00:27:42	100
5	216152	376797	13-May	19:06:35	19:34:19	00:27:43	100
5	216152	376797	14-May	19:06:39	19:34:15	00:27:36	100
5	216152	376797	15-May	19:06:47	19:34:07	00:27:20	100
5	216152	376797	16-May	19:06:59	19:33:56	00:26:56	100
5	216152	376797	17-May	19:07:17	19:33:41	00:26:24	100
5	216152	376797	18-May	19:07:39	19:33:23	00:25:44	100
5	216152	376797	19-May	19:08:05	19:33:01	00:24:56	100
5	216152	376797	20-May	19:08:36	19:32:35	00:23:59	100
5	216152	376797	21-May	19:09:11	19:32:06	00:22:55	100
5	216152	376797	22-May	19:09:52	19:31:34	00:21:43	100
5	216152	376797	23-May	19:10:37	19:30:58	00:20:21	100
5	216152	376797	24-May	19:11:28	19:30:16	00:18:48	100
5	216152	376797	25-May	19:12:27	19:29:28	00:17:01	100
5	216152	376797	26-May	19:13:34	19:28:32	00:14:58	94.13
5	216152	376797	27-May	19:14:55	19:27:25	00:12:30	63.88
5	216152	376797	28-May	19:16:36	19:25:57	00:09:21	34.79
5	216152	376797	29-May	19:19:17	19:23:30	00:04:13	6.87
5	216152	376797	13-Jul	19:25:44	19:33:48	00:08:04	25.59
5	216152	376797	14-Jul	19:24:06	19:35:41	00:11:34	54.04
5	216152	376797	15-Jul	19:22:54	19:37:06	00:14:12	83.62
5	216152	376797	16-Jul	19:21:55	19:38:17	00:16:22	100
5	216152	376797	17-Jul	19:21:05	19:39:18	00:18:12	100
5	216152	376797	18-Jul	19:20:22	19:40:11	00:19:49	100
5	216152	376797	19-Jul	19:19:44	19:40:58	00:21:14	100
5	216152	376797	20-Jul	19:19:10	19:41:39	00:22:29	100
5	216152	376797	21-Jul	19:18:40	19:42:16	00:23:36	100
5	216152	376797	22-Jul	19:18:13	19:42:49	00:24:36	100
5	216152	376797	23-Jul	19:17:50	19:43:16	00:25:26	100
5	216152	376797	24-Jul	19:17:30	19:43:39	00:26:10	100
5	216152	376797	25-Jul	19:17:13	19:43:58	00:26:45	100
5	216152	376797	26-Jul	19:16:59	19:44:12	00:27:12	100
5	216152	376797	27-Jul	19:16:50	19:44:21	00:27:31	100
5	216152	376797	28-Jul	19:16:43	19:44:25	00:27:42	100
5	216152	376797	29-Jul	19:16:41	19:44:24	00:27:44	100
5	216152	376797	30-Jul	19:16:40	19:44:19	00:27:38	100
5	216152	376797	31-Jul	19:16:44	19:44:07	00:27:23	100

5	216152	376797	01-Aug	19:16:52	19:43:50	00:26:57	100
5	216152	376797	02-Aug	19:17:06	19:43:26	00:26:20	100
5	216152	376797	03-Aug	19:17:25	19:42:55	00:25:30	100
5	216152	376797	04-Aug	19:17:51	19:42:15	00:24:25	100
5	216152	376797	05-Aug	19:18:24	19:41:27	00:23:02	100
5	216152	376797	06-Aug	19:19:08	19:40:26	00:21:19	100
5	216152	376797	07-Aug	19:20:04	19:39:11	00:19:07	100
5	216152	376797	08-Aug	19:21:19	19:37:37	00:16:17	100
5	216152	376797	09-Aug	19:23:06	19:35:29	00:12:23	66.65
5	216152	376797	10-Aug	19:26:25	19:31:49	00:05:23	12.08

House Easting Northing  
13 217070 376580

There are no shadows cast on this window

House Easting Northing  
14 216036 378570

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	14-Dec	11:44:41	11:47:52	00:03:11	3.89
2	216143	377705	15-Dec	11:43:48	11:49:42	00:05:54	13.49
2	216143	377705	16-Dec	11:43:31	11:50:57	00:07:27	21.62
2	216143	377705	17-Dec	11:43:28	11:51:58	00:08:30	28.26
2	216143	377705	18-Dec	11:43:36	11:52:49	00:09:13	33.42
2	216143	377705	19-Dec	11:43:51	11:53:33	00:09:42	37.09
2	216143	377705	20-Dec	11:44:13	11:54:11	00:09:58	39.27
2	216143	377705	21-Dec	11:44:40	11:54:43	00:10:03	39.95
2	216143	377705	22-Dec	11:45:13	11:55:10	00:09:57	39.13
2	216143	377705	23-Dec	11:45:51	11:55:31	00:09:40	36.81
2	216143	377705	24-Dec	11:46:36	11:55:46	00:09:10	33
2	216143	377705	25-Dec	11:47:29	11:55:53	00:08:25	27.69
2	216143	377705	26-Dec	11:48:31	11:55:50	00:07:19	20.88
2	216143	377705	27-Dec	11:49:50	11:55:31	00:05:42	12.58
2	216143	377705	28-Dec	11:51:49	11:54:31	00:02:41	2.79

House Easting Northing  
15 215160 378218

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
1	215862	377603	25-Jan	09:13:34	09:15:30	00:01:56	1.6
1	215862	377603	26-Jan	09:09:29	09:19:59	00:10:29	38.21

1	215862	377603	27-Jan	09:07:15	09:22:10	00:14:54	63.63
1	215862	377603	28-Jan	09:05:38	09:23:47	00:18:09	100
1	215862	377603	29-Jan	09:04:26	09:25:05	00:20:39	100
1	215862	377603	30-Jan	09:03:32	09:26:09	00:22:38	100
1	215862	377603	31-Jan	09:02:49	09:27:02	00:24:14	100
1	215862	377603	01-Feb	09:02:16	09:27:47	00:25:31	100
1	215862	377603	02-Feb	09:01:50	09:28:24	00:26:34	100
1	215862	377603	03-Feb	09:01:32	09:28:53	00:27:20	100
1	215862	377603	04-Feb	09:01:21	09:29:13	00:27:52	100
1	215862	377603	05-Feb	09:01:16	09:29:26	00:28:10	100
1	215862	377603	06-Feb	09:01:18	09:29:31	00:28:13	100
1	215862	377603	07-Feb	09:01:27	09:29:27	00:28:00	100
1	215862	377603	08-Feb	09:01:43	09:29:15	00:27:32	100
1	215862	377603	09-Feb	09:02:07	09:28:54	00:26:47	100
1	215862	377603	10-Feb	09:02:39	09:28:21	00:25:42	100
1	215862	377603	11-Feb	09:03:22	09:27:36	00:24:14	100
1	215862	377603	12-Feb	09:04:18	09:26:36	00:22:18	100
1	215862	377603	13-Feb	09:05:31	09:25:15	00:19:44	100
1	215862	377603	14-Feb	09:07:11	09:23:20	00:16:09	100
1	215862	377603	15-Feb	09:09:36	09:20:12	00:10:36	52.46
1	215862	377603	26-Oct	08:41:25	08:47:55	00:06:30	19.24
1	215862	377603	27-Oct	08:37:59	08:51:37	00:13:38	83.06
1	215862	377603	28-Oct	08:35:54	08:53:54	00:17:59	100
1	215862	377603	29-Oct	08:34:24	08:55:24	00:21:00	100
1	215862	377603	30-Oct	08:33:17	08:56:31	00:23:14	100
1	215862	377603	31-Oct	08:32:25	08:57:21	00:24:56	100
1	215862	377603	01-Nov	08:31:47	08:57:59	00:26:13	100
1	215862	377603	02-Nov	08:31:20	08:58:28	00:27:08	100
1	215862	377603	03-Nov	08:31:02	08:58:48	00:27:46	100
1	215862	377603	04-Nov	08:30:53	08:59:01	00:28:08	100
1	215862	377603	05-Nov	08:30:53	08:59:07	00:28:14	100
1	215862	377603	06-Nov	08:31:01	08:59:07	00:28:06	100
1	215862	377603	07-Nov	08:31:17	08:59:01	00:27:43	100
1	215862	377603	08-Nov	08:31:41	08:58:48	00:27:07	100
1	215862	377603	09-Nov	08:32:14	08:58:29	00:26:16	100
1	215862	377603	10-Nov	08:32:55	08:58:04	00:25:09	100
1	215862	377603	11-Nov	08:33:46	08:57:33	00:23:47	100
1	215862	377603	12-Nov	08:34:49	08:56:55	00:22:06	100
1	215862	377603	13-Nov	08:36:06	08:56:06	00:20:00	100
1	215862	377603	14-Nov	08:37:43	08:55:05	00:17:21	98.83
1	215862	377603	15-Nov	08:39:52	08:53:43	00:13:51	50.59
1	215862	377603	16-Nov	08:42:36	08:51:42	00:09:06	36.26

House	Easting	Northing
16	216028	378669

There are no shadows cast on this window

House Easting Northing  
17 216009 378609

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	14-Dec	11:37:09	11:41:23	00:04:14	7.16
2	216143	377705	15-Dec	11:36:31	11:42:58	00:06:28	16.77
2	216143	377705	16-Dec	11:36:18	11:44:22	00:08:04	24.91
2	216143	377705	17-Dec	11:36:18	11:45:52	00:09:33	31.56
2	216143	377705	18-Dec	11:36:27	11:47:01	00:10:34	36.73
2	216143	377705	19-Dec	11:36:43	11:47:54	00:11:10	40.41
2	216143	377705	20-Dec	11:37:05	11:48:36	00:11:31	42.59
2	216143	377705	21-Dec	11:37:33	11:49:09	00:11:37	43.28
2	216143	377705	22-Dec	11:38:06	11:49:35	00:11:29	42.47
2	216143	377705	23-Dec	11:38:44	11:49:51	00:11:08	40.16
2	216143	377705	24-Dec	11:39:27	11:49:57	00:10:29	36.35
2	216143	377705	25-Dec	11:40:18	11:49:44	00:09:26	31.05
2	216143	377705	26-Dec	11:41:18	11:49:14	00:07:56	24.24
2	216143	377705	27-Dec	11:42:31	11:48:49	00:06:18	15.95
2	216143	377705	28-Dec	11:44:11	11:48:07	00:03:56	6.17

House Easting Northing  
18 216094 378289

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
1	215862	377603	01-Jan	13:35:59	14:01:32	00:25:33	100
1	215862	377603	02-Jan	13:37:00	14:01:30	00:24:30	100
1	215862	377603	03-Jan	13:38:07	14:01:22	00:23:15	100
1	215862	377603	04-Jan	13:39:21	14:01:06	00:21:45	84.71
1	215862	377603	05-Jan	13:40:46	14:00:42	00:19:55	64.22
1	215862	377603	06-Jan	13:42:28	14:00:04	00:17:36	42.29
1	215862	377603	07-Jan	13:44:44	13:59:05	00:14:21	18.95
1	215862	377603	08-Jan	13:48:39	13:57:15	00:08:36	3.57
1	215862	377603	04-Dec	13:30:26	13:42:33	00:12:07	7.68
1	215862	377603	05-Dec	13:28:24	13:44:39	00:16:15	31.52
1	215862	377603	06-Dec	13:27:22	13:46:17	00:18:55	53.97
1	215862	377603	07-Dec	13:26:43	13:47:40	00:20:57	75.03
1	215862	377603	08-Dec	13:26:18	13:48:53	00:22:35	94.68
1	215862	377603	09-Dec	13:26:03	13:49:58	00:23:56	100
1	215862	377603	10-Dec	13:25:55	13:50:58	00:25:04	100
1	215862	377603	11-Dec	13:25:52	13:51:54	00:26:01	100

1	215862	377603	12-Dec	13:25:55	13:52:45	00:26:50	100
1	215862	377603	13-Dec	13:26:02	13:53:34	00:27:32	100
1	215862	377603	14-Dec	13:26:13	13:54:19	00:28:06	100
1	215862	377603	15-Dec	13:26:27	13:55:02	00:28:35	100
1	215862	377603	16-Dec	13:26:44	13:55:43	00:28:59	100
1	215862	377603	17-Dec	13:27:03	13:56:21	00:29:18	100
1	215862	377603	18-Dec	13:27:25	13:56:57	00:29:32	100
1	215862	377603	19-Dec	13:27:50	13:57:32	00:29:42	100
1	215862	377603	20-Dec	13:28:17	13:58:04	00:29:48	100
1	215862	377603	21-Dec	13:28:46	13:58:35	00:29:49	100
1	215862	377603	22-Dec	13:29:17	13:59:03	00:29:47	100
1	215862	377603	23-Dec	13:29:50	13:59:30	00:29:40	100
1	215862	377603	24-Dec	13:30:26	13:59:55	00:29:29	100
1	215862	377603	25-Dec	13:31:03	14:00:17	00:29:13	100
1	215862	377603	26-Dec	13:31:43	14:00:37	00:28:53	100
1	215862	377603	27-Dec	13:32:26	14:00:54	00:28:28	100
1	215862	377603	28-Dec	13:33:11	14:01:09	00:27:58	100
1	215862	377603	29-Dec	13:33:59	14:01:20	00:27:21	100
1	215862	377603	30-Dec	13:34:50	14:01:28	00:26:38	100
1	215862	377603	31-Dec	13:35:45	14:01:32	00:25:46	100
2	216143	377705	01-Jan	11:41:53	12:23:36	00:41:44	100
2	216143	377705	02-Jan	11:42:28	12:23:57	00:41:29	100
2	216143	377705	03-Jan	11:43:03	12:24:16	00:41:13	100
2	216143	377705	04-Jan	11:43:40	12:24:34	00:40:53	100
2	216143	377705	05-Jan	11:44:18	12:28:46	00:44:28	100
2	216143	377705	06-Jan	11:44:57	12:28:59	00:44:03	100
2	216143	377705	07-Jan	11:45:37	12:29:11	00:43:34	100
2	216143	377705	08-Jan	11:46:19	12:29:20	00:43:01	100
2	216143	377705	09-Jan	11:47:02	12:29:26	00:42:24	100
2	216143	377705	10-Jan	11:47:47	12:29:28	00:41:41	100
2	216143	377705	11-Jan	11:48:35	12:29:28	00:40:53	100
2	216143	377705	12-Jan	11:49:25	12:29:23	00:39:59	100
2	216143	377705	13-Jan	11:50:18	12:29:14	00:38:57	100
2	216143	377705	14-Jan	11:51:14	12:29:00	00:37:46	100
2	216143	377705	15-Jan	11:52:15	12:28:41	00:36:26	100
2	216143	377705	16-Jan	11:53:20	12:28:14	00:34:54	100
2	216143	377705	17-Jan	11:54:31	12:27:39	00:33:08	100
2	216143	377705	18-Jan	11:55:50	12:26:55	00:31:04	100
2	216143	377705	19-Jan	11:57:19	12:25:57	00:28:38	100
2	216143	377705	20-Jan	11:59:02	12:24:40	00:25:38	100
2	216143	377705	21-Jan	12:01:06	12:22:52	00:21:46	83.03
2	216143	377705	22-Jan	12:03:52	12:19:47	00:15:56	40.3
2	216143	377705	19-Nov	11:39:52	11:49:50	00:09:58	17.8
2	216143	377705	20-Nov	11:36:50	11:56:00	00:19:10	60.63
2	216143	377705	21-Nov	11:35:01	11:58:47	00:23:45	100

2	216143	377705	22-Nov	11:33:43	12:00:50	00:27:07	100
2	216143	377705	23-Nov	11:32:43	12:02:32	00:29:49	100
2	216143	377705	24-Nov	11:31:56	12:03:59	00:32:03	100
2	216143	377705	25-Nov	11:31:19	12:05:17	00:33:58	100
2	216143	377705	26-Nov	11:30:50	12:06:27	00:35:36	100
2	216143	377705	27-Nov	11:30:29	12:07:31	00:37:02	100
2	216143	377705	28-Nov	11:30:13	12:08:31	00:38:18	100
2	216143	377705	29-Nov	11:30:02	12:09:26	00:39:24	100
2	216143	377705	30-Nov	11:29:55	12:10:18	00:40:22	100
2	216143	377705	01-Dec	11:29:53	12:11:07	00:41:14	100
2	216143	377705	02-Dec	11:29:54	12:11:54	00:41:59	100
2	216143	377705	03-Dec	11:29:59	12:12:38	00:42:39	100
2	216143	377705	04-Dec	11:30:06	12:13:21	00:43:15	100
2	216143	377705	05-Dec	11:30:16	12:14:02	00:43:46	100
2	216143	377705	06-Dec	11:30:28	12:14:41	00:44:13	100
2	216143	377705	07-Dec	11:30:43	12:15:06	00:44:24	100
2	216143	377705	08-Dec	11:30:59	12:12:00	00:41:01	100
2	216143	377705	09-Dec	11:31:17	12:12:36	00:41:19	100
2	216143	377705	10-Dec	11:31:37	12:13:12	00:41:35	100
2	216143	377705	11-Dec	11:31:58	12:13:46	00:41:48	100
2	216143	377705	12-Dec	11:32:20	12:14:20	00:41:59	100
2	216143	377705	13-Dec	11:32:44	12:14:54	00:42:10	100
2	216143	377705	14-Dec	11:33:09	12:15:27	00:42:18	100
2	216143	377705	15-Dec	11:33:34	12:15:59	00:42:25	100
2	216143	377705	16-Dec	11:34:01	12:16:31	00:42:30	100
2	216143	377705	17-Dec	11:34:28	12:17:03	00:42:35	100
2	216143	377705	18-Dec	11:34:55	12:17:34	00:42:38	100
2	216143	377705	19-Dec	11:35:24	12:18:05	00:42:41	100
2	216143	377705	20-Dec	11:35:53	12:18:35	00:42:42	100
2	216143	377705	21-Dec	11:36:22	12:19:05	00:42:43	100
2	216143	377705	22-Dec	11:36:53	12:19:35	00:42:42	100
2	216143	377705	23-Dec	11:37:23	12:20:04	00:42:41	100
2	216143	377705	24-Dec	11:37:54	12:20:32	00:42:38	100
2	216143	377705	25-Dec	11:38:26	12:21:00	00:42:34	100
2	216143	377705	26-Dec	11:38:58	12:21:28	00:42:30	100
2	216143	377705	27-Dec	11:39:30	12:21:54	00:42:24	100
2	216143	377705	28-Dec	11:40:03	12:22:20	00:42:17	100
2	216143	377705	29-Dec	11:40:36	12:22:45	00:42:09	100
2	216143	377705	30-Dec	11:41:10	12:23:08	00:41:58	100
2	216143	377705	31-Dec	11:41:44	12:23:31	00:41:47	100
3	216382	377409	01-Jan	10:54:57	11:19:14	00:24:17	100
3	216382	377409	02-Jan	10:55:43	11:19:23	00:23:40	100
3	216382	377409	03-Jan	10:56:32	11:19:28	00:22:56	100
3	216382	377409	04-Jan	10:57:25	11:19:29	00:22:04	100
3	216382	377409	05-Jan	10:58:21	11:19:24	00:21:03	100

3	216382	377409	06-Jan	10:59:22	11:19:13	00:19:51	100
3	216382	377409	07-Jan	11:00:30	11:18:53	00:18:23	100
3	216382	377409	08-Jan	11:01:44	11:18:21	00:16:38	98.49
3	216382	377409	09-Jan	11:03:08	11:17:30	00:14:22	72.51
3	216382	377409	10-Jan	11:04:51	11:15:55	00:11:04	45.15
3	216382	377409	11-Jan	11:07:16	11:13:30	00:06:15	16.42
3	216382	377409	01-Dec	10:47:56	10:55:55	00:07:59	26.01
3	216382	377409	02-Dec	10:46:39	10:58:59	00:12:20	54.09
3	216382	377409	03-Dec	10:45:52	11:01:02	00:15:10	80.82
3	216382	377409	04-Dec	10:45:22	11:02:36	00:17:14	100
3	216382	377409	05-Dec	10:45:01	11:03:54	00:18:52	100
3	216382	377409	06-Dec	10:44:48	11:05:02	00:20:15	100
3	216382	377409	07-Dec	10:44:41	11:06:04	00:21:23	100
3	216382	377409	08-Dec	10:44:39	11:07:00	00:22:21	100
3	216382	377409	09-Dec	10:44:43	11:07:52	00:23:10	100
3	216382	377409	10-Dec	10:44:50	11:08:41	00:23:52	100
3	216382	377409	11-Dec	10:44:59	11:09:27	00:24:27	100
3	216382	377409	12-Dec	10:45:13	11:10:11	00:24:58	100
3	216382	377409	13-Dec	10:45:29	11:10:52	00:25:23	100
3	216382	377409	14-Dec	10:45:47	11:11:32	00:25:45	100
3	216382	377409	15-Dec	10:46:07	11:12:10	00:26:03	100
3	216382	377409	16-Dec	10:46:29	11:12:47	00:26:17	100
3	216382	377409	17-Dec	10:46:53	11:13:22	00:26:29	100
3	216382	377409	18-Dec	10:47:18	11:13:56	00:26:38	100
3	216382	377409	19-Dec	10:47:45	11:14:29	00:26:44	100
3	216382	377409	20-Dec	10:48:13	11:15:00	00:26:48	100
3	216382	377409	21-Dec	10:48:42	11:15:31	00:26:49	100
3	216382	377409	22-Dec	10:49:12	11:15:59	00:26:47	100
3	216382	377409	23-Dec	10:49:44	11:16:28	00:26:44	100
3	216382	377409	24-Dec	10:50:17	11:16:54	00:26:37	100
3	216382	377409	25-Dec	10:50:51	11:17:20	00:26:29	100
3	216382	377409	26-Dec	10:51:26	11:17:43	00:26:17	100
3	216382	377409	27-Dec	10:52:03	11:18:05	00:26:02	100
3	216382	377409	28-Dec	10:52:41	11:18:25	00:25:44	100
3	216382	377409	29-Dec	10:53:21	11:18:43	00:25:22	100
3	216382	377409	30-Dec	10:54:03	11:18:59	00:24:56	100
3	216382	377409	31-Dec	10:54:46	11:19:12	00:24:26	100

House Easting Northing  
19 215785 378202

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
1	215862	377603	01-Jan	11:37:48	12:15:12	00:37:24	100
1	215862	377603	02-Jan	11:38:27	12:15:42	00:37:15	100

1	215862	377603	03-Jan	11:39:08	12:15:59	00:36:51	100
1	215862	377603	04-Jan	11:39:49	12:16:13	00:36:24	100
1	215862	377603	05-Jan	11:40:32	12:16:25	00:35:53	100
1	215862	377603	06-Jan	11:41:17	12:16:35	00:35:18	100
1	215862	377603	07-Jan	11:42:04	12:16:41	00:34:38	100
1	215862	377603	08-Jan	11:42:53	12:16:45	00:33:52	100
1	215862	377603	09-Jan	11:43:45	12:16:45	00:33:01	100
1	215862	377603	10-Jan	11:44:39	12:16:42	00:32:03	100
1	215862	377603	11-Jan	11:45:37	12:16:34	00:30:56	100
1	215862	377603	12-Jan	11:46:40	12:16:21	00:29:41	100
1	215862	377603	13-Jan	11:47:47	12:16:02	00:28:15	100
1	215862	377603	14-Jan	11:49:00	12:15:36	00:26:35	100
1	215862	377603	15-Jan	11:50:22	12:15:01	00:24:40	100
1	215862	377603	16-Jan	11:51:53	12:14:16	00:22:22	100
1	215862	377603	17-Jan	11:53:40	12:13:16	00:19:35	100
1	215862	377603	18-Jan	11:55:52	12:11:54	00:16:01	75.35
1	215862	377603	19-Jan	11:58:42	12:09:50	00:11:08	36.22
1	215862	377603	22-Nov	11:36:24	11:43:29	00:07:04	14.4
1	215862	377603	23-Nov	11:33:27	11:46:59	00:13:32	53.78
1	215862	377603	24-Nov	11:31:32	11:49:16	00:17:44	91.98
1	215862	377603	25-Nov	11:30:12	11:51:05	00:20:53	100
1	215862	377603	26-Nov	11:29:12	11:52:37	00:23:25	100
1	215862	377603	27-Nov	11:28:27	11:53:58	00:25:31	100
1	215862	377603	28-Nov	11:27:52	11:55:11	00:27:19	100
1	215862	377603	29-Nov	11:27:25	11:56:17	00:28:52	100
1	215862	377603	30-Nov	11:27:06	11:57:19	00:30:13	100
1	215862	377603	01-Dec	11:26:52	11:58:16	00:31:24	100
1	215862	377603	02-Dec	11:26:43	11:59:09	00:32:27	100
1	215862	377603	03-Dec	11:26:38	12:00:00	00:33:22	100
1	215862	377603	04-Dec	11:26:38	12:00:48	00:34:11	100
1	215862	377603	05-Dec	11:26:40	12:01:34	00:34:54	100
1	215862	377603	06-Dec	11:26:46	12:02:18	00:35:31	100
1	215862	377603	07-Dec	11:26:55	12:02:59	00:36:05	100
1	215862	377603	08-Dec	11:27:06	12:03:41	00:36:34	100
1	215862	377603	09-Dec	11:27:20	12:04:20	00:37:00	100
1	215862	377603	10-Dec	11:27:35	12:04:58	00:37:23	100
1	215862	377603	11-Dec	11:27:53	12:04:57	00:37:05	100
1	215862	377603	12-Dec	11:28:12	12:05:35	00:37:23	100
1	215862	377603	13-Dec	11:28:33	12:02:50	00:34:18	100
1	215862	377603	14-Dec	11:28:55	12:03:25	00:34:30	100
1	215862	377603	15-Dec	11:29:18	12:03:59	00:34:41	100
1	215862	377603	16-Dec	11:29:43	12:04:32	00:34:49	100
1	215862	377603	17-Dec	11:30:09	12:05:05	00:34:56	100
1	215862	377603	18-Dec	11:30:35	12:05:37	00:35:01	100
1	215862	377603	19-Dec	11:31:03	12:06:08	00:35:05	100
1	215862	377603	20-Dec	11:31:32	12:06:39	00:35:07	100

1	215862	377603	21-Dec	11:32:01	12:07:09	00:35:08	100
1	215862	377603	22-Dec	11:32:31	12:07:38	00:35:07	100
1	215862	377603	23-Dec	11:33:02	12:08:07	00:35:05	100
1	215862	377603	24-Dec	11:33:34	12:08:35	00:35:01	100
1	215862	377603	25-Dec	11:34:07	12:09:02	00:34:55	100
1	215862	377603	26-Dec	11:34:40	12:09:29	00:34:48	100
1	215862	377603	27-Dec	11:35:14	12:09:54	00:34:40	100
1	215862	377603	28-Dec	11:35:49	12:10:18	00:34:29	100
1	215862	377603	29-Dec	11:36:25	12:10:41	00:34:16	100
1	215862	377603	30-Dec	11:37:02	12:14:23	00:37:21	100
1	215862	377603	31-Dec	11:37:39	12:14:41	00:37:02	100
2	216143	377705	12-Jan	10:01:27	10:10:39	00:09:12	24.61
2	216143	377705	13-Jan	09:59:30	10:13:18	00:13:48	55.91
2	216143	377705	14-Jan	09:58:02	10:15:20	00:17:18	88.54
2	216143	377705	15-Jan	09:56:55	10:17:05	00:20:10	100
2	216143	377705	16-Jan	09:55:59	10:18:38	00:22:38	100
2	216143	377705	17-Jan	09:55:13	10:20:01	00:24:48	100
2	216143	377705	18-Jan	09:54:33	10:21:18	00:26:45	100
2	216143	377705	19-Jan	09:53:58	10:22:28	00:28:30	100
2	216143	377705	20-Jan	09:53:27	10:23:32	00:30:05	100
2	216143	377705	21-Jan	09:53:01	10:24:31	00:31:31	100
2	216143	377705	22-Jan	09:52:38	10:25:26	00:32:48	100
2	216143	377705	23-Jan	09:52:18	10:26:15	00:33:57	100
2	216143	377705	24-Jan	09:52:01	10:27:00	00:34:59	100
2	216143	377705	25-Jan	09:51:48	10:27:41	00:35:53	100
2	216143	377705	26-Jan	09:51:38	10:28:17	00:36:39	100
2	216143	377705	27-Jan	09:51:30	10:28:52	00:37:21	100
2	216143	377705	28-Jan	09:51:26	10:29:24	00:37:58	100
2	216143	377705	29-Jan	09:51:25	10:29:52	00:38:27	100
2	216143	377705	30-Jan	09:51:27	10:30:15	00:38:47	100
2	216143	377705	31-Jan	09:51:33	10:30:33	00:38:59	100
2	216143	377705	01-Feb	09:51:42	10:30:45	00:39:04	100
2	216143	377705	02-Feb	09:51:55	10:30:53	00:38:58	100
2	216143	377705	03-Feb	09:52:12	10:30:55	00:38:44	100
2	216143	377705	04-Feb	09:52:33	10:30:52	00:38:19	100
2	216143	377705	05-Feb	09:52:59	10:30:43	00:37:44	100
2	216143	377705	06-Feb	09:53:30	10:30:27	00:36:58	100
2	216143	377705	07-Feb	09:54:07	10:30:05	00:35:58	100
2	216143	377705	08-Feb	09:54:45	10:29:35	00:34:50	100
2	216143	377705	09-Feb	09:55:29	10:28:56	00:33:27	100
2	216143	377705	10-Feb	09:56:23	10:28:09	00:31:46	100
2	216143	377705	11-Feb	09:57:26	10:27:09	00:29:43	100
2	216143	377705	12-Feb	09:58:42	10:25:56	00:27:15	100
2	216143	377705	13-Feb	10:00:15	10:24:26	00:24:10	100
2	216143	377705	14-Feb	10:02:15	10:22:29	00:20:14	100

2	216143	377705	15-Feb	10:05:04	10:19:45	00:14:41	67.22
2	216143	377705	16-Feb	10:11:19	10:13:45	00:02:27	1.88
2	216143	377705	26-Oct	09:36:42	09:47:55	00:11:12	39.06
2	216143	377705	27-Oct	09:33:02	09:51:06	00:18:04	100
2	216143	377705	28-Oct	09:30:40	09:53:11	00:22:31	100
2	216143	377705	29-Oct	09:28:52	09:54:46	00:25:54	100
2	216143	377705	30-Oct	09:27:26	09:56:03	00:28:36	100
2	216143	377705	31-Oct	09:26:16	09:57:05	00:30:49	100
2	216143	377705	01-Nov	09:25:18	09:57:57	00:32:39	100
2	216143	377705	02-Nov	09:24:31	09:58:41	00:34:10	100
2	216143	377705	03-Nov	09:23:53	09:59:18	00:35:25	100
2	216143	377705	04-Nov	09:23:20	09:59:48	00:36:28	100
2	216143	377705	05-Nov	09:22:53	10:00:13	00:37:21	100
2	216143	377705	06-Nov	09:22:32	10:00:33	00:38:02	100
2	216143	377705	07-Nov	09:22:17	10:00:49	00:38:32	100
2	216143	377705	08-Nov	09:22:09	10:01:00	00:38:52	100
2	216143	377705	09-Nov	09:22:06	10:01:08	00:39:02	100
2	216143	377705	10-Nov	09:22:09	10:01:12	00:39:04	100
2	216143	377705	11-Nov	09:22:17	10:01:13	00:38:56	100
2	216143	377705	12-Nov	09:22:30	10:01:11	00:38:41	100
2	216143	377705	13-Nov	09:22:48	10:01:05	00:38:18	100
2	216143	377705	14-Nov	09:23:10	10:00:57	00:37:46	100
2	216143	377705	15-Nov	09:23:38	10:00:45	00:37:08	100
2	216143	377705	16-Nov	09:24:10	10:00:34	00:36:25	100
2	216143	377705	17-Nov	09:24:46	10:00:23	00:35:36	100
2	216143	377705	18-Nov	09:25:28	10:00:08	00:34:40	100
2	216143	377705	19-Nov	09:26:14	09:59:51	00:33:37	100
2	216143	377705	20-Nov	09:27:04	09:59:30	00:32:26	100
2	216143	377705	21-Nov	09:28:00	09:59:07	00:31:07	100
2	216143	377705	22-Nov	09:29:01	09:58:40	00:29:39	100
2	216143	377705	23-Nov	09:30:07	09:58:09	00:28:02	100
2	216143	377705	24-Nov	09:31:20	09:57:34	00:26:14	100
2	216143	377705	25-Nov	09:32:40	09:56:55	00:24:15	100
2	216143	377705	26-Nov	09:34:07	09:56:09	00:22:01	100
2	216143	377705	27-Nov	09:35:46	09:55:15	00:19:29	100
2	216143	377705	28-Nov	09:37:39	09:54:09	00:16:30	80.06
2	216143	377705	29-Nov	09:39:57	09:52:45	00:12:47	48.04
2	216143	377705	30-Nov	09:42:51	09:50:36	00:07:45	17.31

House Easting Northing  
20 216115 378498

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	11-Dec	12:08:29	12:11:02	00:02:34	2.32

2	216143	377705	12-Dec	12:06:51	12:13:36	00:06:45	16.29
2	216143	377705	13-Dec	12:06:13	12:15:10	00:08:57	28.8
2	216143	377705	14-Dec	12:05:56	12:16:25	00:10:29	39.85
2	216143	377705	15-Dec	12:05:50	12:17:28	00:11:38	49.43
2	216143	377705	16-Dec	12:05:52	12:18:23	00:12:31	57.54
2	216143	377705	17-Dec	12:06:01	12:19:13	00:13:12	64.16
2	216143	377705	18-Dec	12:06:13	12:19:57	00:13:44	69.3
2	216143	377705	19-Dec	12:06:32	12:20:37	00:14:05	72.95
2	216143	377705	20-Dec	12:06:55	12:21:12	00:14:17	75.1
2	216143	377705	21-Dec	12:07:23	12:21:44	00:14:21	75.75
2	216143	377705	22-Dec	12:07:55	12:22:11	00:14:16	74.91
2	216143	377705	23-Dec	12:08:32	12:22:35	00:14:03	72.57
2	216143	377705	24-Dec	12:09:14	12:22:54	00:13:40	68.73
2	216143	377705	25-Dec	12:10:01	12:23:08	00:13:07	63.39
2	216143	377705	26-Dec	12:10:52	12:23:17	00:12:25	56.56
2	216143	377705	27-Dec	12:11:50	12:23:19	00:11:30	48.23
2	216143	377705	28-Dec	12:12:55	12:23:13	00:10:17	38.42
2	216143	377705	29-Dec	12:14:13	12:22:53	00:08:41	27.12
2	216143	377705	30-Dec	12:15:52	12:22:12	00:06:20	14.35
2	216143	377705	31-Dec	12:19:15	12:19:47	00:00:32	0.1

House Easting Northing  
21 216118 378397

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	01-Jan	12:05:58	12:32:48	00:26:50	100
2	216143	377705	02-Jan	12:06:48	12:32:56	00:26:08	100
2	216143	377705	03-Jan	12:07:41	12:33:00	00:25:20	100
2	216143	377705	04-Jan	12:08:37	12:33:01	00:24:24	100
2	216143	377705	05-Jan	12:09:37	12:32:56	00:23:19	100
2	216143	377705	06-Jan	12:10:43	12:32:47	00:22:04	100
2	216143	377705	07-Jan	12:11:55	12:32:30	00:20:35	100
2	216143	377705	08-Jan	12:13:15	12:32:06	00:18:50	100
2	216143	377705	09-Jan	12:14:47	12:31:30	00:16:43	92.64
2	216143	377705	10-Jan	12:16:36	12:30:38	00:14:02	65.22
2	216143	377705	11-Jan	12:18:44	12:29:19	00:10:34	36.43
2	216143	377705	12-Jan	12:22:12	12:26:38	00:04:26	6.29
2	216143	377705	30-Nov	12:01:13	12:09:02	00:07:48	19.62
2	216143	377705	01-Dec	11:59:23	12:11:37	00:12:14	48.94
2	216143	377705	02-Dec	11:58:14	12:13:29	00:15:15	76.94
2	216143	377705	03-Dec	11:57:22	12:15:02	00:17:40	100
2	216143	377705	04-Dec	11:56:45	12:16:22	00:19:37	100
2	216143	377705	05-Dec	11:56:20	12:17:34	00:21:14	100
2	216143	377705	06-Dec	11:56:03	12:18:39	00:22:36	100

2	216143	377705	07-Dec	11:55:52	12:19:39	00:23:46	100
2	216143	377705	08-Dec	11:55:48	12:20:35	00:24:47	100
2	216143	377705	09-Dec	11:55:47	12:21:27	00:25:40	100
2	216143	377705	10-Dec	11:55:51	12:22:16	00:26:25	100
2	216143	377705	11-Dec	11:55:58	12:23:03	00:27:05	100
2	216143	377705	12-Dec	11:56:09	12:23:48	00:27:39	100
2	216143	377705	13-Dec	11:56:22	12:24:30	00:28:08	100
2	216143	377705	14-Dec	11:56:38	12:25:11	00:28:33	100
2	216143	377705	15-Dec	11:56:56	12:25:50	00:28:54	100
2	216143	377705	16-Dec	11:57:16	12:26:27	00:29:11	100
2	216143	377705	17-Dec	11:57:39	12:27:03	00:29:25	100
2	216143	377705	18-Dec	11:58:03	12:27:38	00:29:35	100
2	216143	377705	19-Dec	11:58:29	12:28:11	00:29:42	100
2	216143	377705	20-Dec	11:58:56	12:28:43	00:29:47	100
2	216143	377705	21-Dec	11:59:25	12:29:13	00:29:48	100
2	216143	377705	22-Dec	11:59:56	12:29:42	00:29:46	100
2	216143	377705	23-Dec	12:00:28	12:30:10	00:29:41	100
2	216143	377705	24-Dec	12:01:02	12:30:36	00:29:34	100
2	216143	377705	25-Dec	12:01:37	12:31:00	00:29:23	100
2	216143	377705	26-Dec	12:02:14	12:31:23	00:29:09	100
2	216143	377705	27-Dec	12:02:53	12:31:44	00:28:51	100
2	216143	377705	28-Dec	12:03:33	12:32:03	00:28:30	100
2	216143	377705	29-Dec	12:04:16	12:32:20	00:28:04	100
2	216143	377705	30-Dec	12:04:59	12:32:34	00:27:34	100
2	216143	377705	31-Dec	12:05:47	12:32:46	00:26:59	100

House Easting Northing  
22 216152 378448

Turbine	Easting	Northing	Date	Start Time	End Time	Duration	% Cover
2	216143	377705	01-Jan	12:24:33	12:38:46	00:14:13	70.78
2	216143	377705	02-Jan	12:25:51	12:38:25	00:12:34	54.71
2	216143	377705	03-Jan	12:27:24	12:37:48	00:10:25	37.18
2	216143	377705	04-Jan	12:29:24	12:36:43	00:07:20	18.21
2	216143	377705	07-Dec	12:17:47	12:22:13	00:04:26	6.58
2	216143	377705	08-Dec	12:16:03	12:24:50	00:08:48	26.29
2	216143	377705	09-Dec	12:15:12	12:26:35	00:11:23	44.57
2	216143	377705	10-Dec	12:14:41	12:27:59	00:13:18	61.42
2	216143	377705	11-Dec	12:14:23	12:29:12	00:14:48	76.83
2	216143	377705	12-Dec	12:14:11	12:30:16	00:16:05	90.8
2	216143	377705	13-Dec	12:14:06	12:31:14	00:17:08	100
2	216143	377705	14-Dec	12:14:08	12:32:07	00:17:59	100
2	216143	377705	15-Dec	12:14:15	12:32:56	00:18:41	100
2	216143	377705	16-Dec	12:14:26	12:33:41	00:19:15	100

2	216143	377705	17-Dec	12:14:42	12:34:23	00:19:42	100
2	216143	377705	18-Dec	12:15:01	12:35:03	00:20:02	100
2	216143	377705	19-Dec	12:15:23	12:35:39	00:20:16	100
2	216143	377705	20-Dec	12:15:49	12:36:12	00:20:24	100
2	216143	377705	21-Dec	12:16:17	12:36:43	00:20:26	100
2	216143	377705	22-Dec	12:16:49	12:37:12	00:20:23	100
2	216143	377705	23-Dec	12:17:23	12:37:37	00:20:14	100
2	216143	377705	24-Dec	12:18:01	12:37:59	00:19:59	100
2	216143	377705	25-Dec	12:18:41	12:38:20	00:19:38	100
2	216143	377705	26-Dec	12:19:26	12:38:36	00:19:10	100
2	216143	377705	27-Dec	12:20:13	12:38:49	00:18:35	100
2	216143	377705	28-Dec	12:21:05	12:38:57	00:17:52	100
2	216143	377705	29-Dec	12:22:02	12:39:01	00:16:59	100
2	216143	377705	30-Dec	12:23:05	12:38:59	00:15:54	88.72
2	216143	377705	31-Dec	12:24:16	12:38:50	00:14:34	74.46

House Easting Northing  
23 217141 378041

There are no shadows cast on this window

House Easting Northing  
24 216231 378582

There are no shadows cast on this window

House Easting Northing  
25 216268 379184

There are no shadows cast on this window

House Easting Northing  
26 216125 379220

There are no shadows cast on this window

House Easting Northing  
27 215673 378866

There are no shadows cast on this window

