

Appendix 10.1: Birds Technical Report



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Introduction

A targeted ornithological field survey of the Beaw Field Wind Farm (the ‘Proposed Development’) for important and legally protected bird species was undertaken by Alba Ecology Ltd. in 2010 – 2012 and in 2015. All surveyors were fully licensed and trained to undertake their surveys/studies.

Care was taken to ensure that survey methods and the level and type of survey effort was consistent with SNH guidance available at the time surveys commenced (in 2010). This report provides details of the surveys undertaken and a table of the raw data collected, requested by SNH during scoping.

Reconnaissance

A preliminary site visit by Dr Peter Cosgrove in 2010 determined that the Site was upland, open and sloping in character with habitats dominated by wet and dry modified bog. The principal land use of the Study Area was crofting grazing with sheep. Potential bird interest in the Study Area was likely to comprise upland waders, geese, divers, skuas and possibly raptors. An initial desk-based review of the main (protected) bird sensitivities associated within the Study Area was conducted. This was used to identify a range of field survey requirements with the following aims:

- Determine the distribution and abundance of moorland breeding birds - the Study Area predominantly covers upland moorland habitats;
- Investigate the level of bird flight activity across the Study Area throughout the year;
- Investigate the use of the Study Area (and adjacent areas) for nesting red-throated divers;
- Identify any raptor nest sites within relevant buffer distances of the Proposed Development (2km). Existing data sources suggested the only raptor species likely to be potentially affected was merlin; and
- Investigate if the Study Area lies underneath an important migratory flyway for waterfowl (particularly geese and swans).

Field surveyors

The ornithological surveyors used between 2010 and 2012 and in 2015 were Claire Bailly, Chris Bingham, Mark Chapman, Cameron Cosgrove, Peter Cosgrove, Robert Curtis, Kevin Cuthbert, Martha Devine, Euan Ferguson, David Hunt, Katie Lloyd, Ross Macgregor, Robert Potter, Neil Robertson, Malcolm Smith, Chris Townend, and Ryan Wilson-Parr.

The surveyors had extensive ornithological field experience of upland areas. They attended regular training events led by experts, covering areas such as breeding bird survey techniques, estimating distances and heights, recording data concisely and correctly, navigation techniques and Health and Safety. Surveyors were trained to carryout surveys in a systematic manner, following recognised standardised survey methods.

Survey methods

Moorland breeding birds surveys

The modified Brown and Shepherd (1993) Moorland Breeding Bird survey is the standard survey technique for moorland/upland breeding birds (Gilbert *et al.*, 1998) and is described in the SNH online guidance (SNH 2005; revised 2010 and 2014). The Brown and Shepherd methodology is based on a constant search method involving spending 25 minutes in each 500m x 500m quadrant, within the site. This equates to spending 100 minutes for every km². Each quadrant was walked to ensure that all parts were approached to within 100m. At regular intervals, the surveyor paused, scanned the area for species and listened out for calls and songs. All registrations were marked on a 1:25,000 scale map using British Trust for Ornithology (BTO) symbols with a note of the species activity. These surveys were undertaken at least three times each breeding season during 2011 and 2012. In 2015, this survey was undertaken four times. The main habitat was defined as open moorland and so this survey technique was used across all parts of the Study Area.

It should also be noted that there are potential limitations to this survey method. For example, SNH recommend that this survey should not be used to assess the collision risk of raptors or waterfowl, which are more suited to being surveyed using other methods, such as vantage point watches; however the methodology can be useful in adding to territory distribution data for these species and in locating breeding sites.

Population estimates in the Study Area were derived by comparing the summary maps for each of the main seasonal survey periods. Registrations/territories plotted during each period were considered to be separate from one another if more than approximately 500m apart for larger species, 300m in the case of dunlin. If there was any doubt about whether more than one pair of birds was present, surveyors would sit quietly nearby and observe the behaviour, gender and number of birds present as per Brown and Shepherd's 1993 survey methodology. When compiling figures of breeding birds, the approximate central location of all registrations recorded from different visits is used to identify a notional territory centre (the species territory centre 'dot' on the relevant Environmental Statement figure).

When surveys commenced in 2010, the SNH guidelines (SNH 2005; revised 2010) were used. When moorland breeding birds surveys were undertaken 2015, the revised guidelines (SNH 2014) were followed.

Breeding raptor surveys

SNH provide clear guidance in relation to raptor sensitivities and survey effort (2005; revised 2010 and 2014). Surveys were undertaken to determine the location of breeding raptors listed on Annex 1 of the Birds Directive or Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Priority was given to detecting species most likely to occur given the desk study, habitats present and within SNH recommended survey distances. The only regularly occurring and potentially nesting raptor on Yell was merlin, so the SNH recommended 2km search distance was used as the basis for nest searches. Breeding raptor surveys were conducted in 2011, 2012 and 2015. Survey methods followed best practice guidance (e.g. Hardey *et al.* 2009).

Breeding diver surveys

The standard SNH survey guidance for red-throated diver was amended so that SNH concerns relating to adjacent SPA divers could be addressed. The standard SNH guidance at the time the survey work began (SNH 2005; revised 2010) recommended a minimum survey area of 1km, plus all potential parts of any designated sites for divers. Diver nest surveys on Yell were initially conducted in Year 1 on waterbodies out to 8km (which roughly equated a distance up to Mid Yell and so covered all of the Otterswick and Graveland SPA within this area). All potential diver waterbodies in this area were surveyed at least twice during the nesting season. If breeding divers were present, observers returned later in the season to record flightlines to and from nests and breeding success.

Most breeding divers in Shetland fly to the nearest area of coast to feed and their behaviour suggests non-SPA birds in the north of the buffer zone would not come near the Proposed Development in the south. Having considered this, SNH “*agree that it looks unlikely from the topography and the known behaviour of red-throated divers that birds from the north of the buffer zone would fly over Beaw Field. The surveys that you will be doing on the SPA birds should allow us to say with more certainty whether this is the case - if the divers from the northern part of the Otterswick section of the SPA fly consistently away from the windfarm site then we can safely assume that those to the north of the SPA will do so too and so do not need to be surveyed*” (Jonathan Swale, SNH e-mail to Peter Cosgrove, Alba Ecology of 24/01/11). Consequently, subsequent waterbody surveys were targeted in Year 2 within the Otterswick and Graveland SPA (north of the Proposed Development), as well as all potentially suitable waterbodies east, west and south of the Proposed Development. As with the first year, the waterbodies were visited at least twice during the breeding season if nothing was present. However, if occupied, sites were visited again later in the breeding season to determine nest location, flightlines wherever possible and breeding success.

Dedicated additional nest watches to assess typical foraging flightline directions to and from each active nest (as per SNH guidance) was undertaken in 2011, 2012 and 2015. Observers sat quietly in a location that did not disturb the divers but afforded good visibility over the breeding lochan. All incoming and outgoing flight lines were recorded. If breeding attempts failed early in the season it was rarely possible to collect nest watch flightlines from such nests.

Vantage Point Watches

Vantage Point (VP) watches were used to record flight activity and the use of the study area, during the breeding and non-breeding season, for selected target species between October 2010 and September 2012. Care was taken to ensure that flight activity survey methods and the level and type of survey effort was consistent with SNH guidance available at the time surveys commenced (SNH, 2005; revised 2010).

VP watches are designed to record larger birds using the study area but not necessarily breeding there; they include the collection of data of the flight paths of these birds, including height from the ground, duration of sighting, and activities of the birds. Birds recorded by this method include raptors, skuas, gulls, wildfowl and waders. Methods are outlined by Madders (unpublished; given as

appendix in Whitfield, 2002, Whitfield & Bullman, 2004, and SNH, 2005; revised 2010 & 2014), and ultimately result in an analysis of collision risk (Band *et al.*, 2005) and flightline distribution.

During initial discussions, SNH recommended that nine additional hours surveying should be undertaken at each VP during each of the breeding seasons to increase the sample size of flights collected. Thus, the standard minimum of 36 hours per VP was increased to a minimum of 45 hours per VP for the two breeding seasons. The number of hours spent at each VP is cumulative. Best practice recommends not spending longer than three hours VP watching at any one time, as the attention of the observer is known to become less efficient after this period. An effort was made to vary the timing of each VP watch, although properly stratifying this was impractical with only two visits per month. VP surveys were conducted between daylight hours, when visibility allowed a clear view of the surrounding area.

Enough VPs must be selected to enable most of the airspace above the turbine area to be seen, including a 500m survey buffer, (SNH, 2005; revised 2010 & 2014). The initial Study Area was much larger than the final design layout (which was amended in light of SPA diver flightlines recorded during surveys). Therefore, the area surveyed in 2010-2012 covered a much greater area than the final Turbine Area (ES Volume 2: Figure 10.1). Only eight of the thirteen VPs originally selected in 2010 overlooked the Turbine Area.

Standard SNH guidance recommends that VP watches should view out to a maximum of 2km (SNH, 2005; revised 2010). VP locations were selected to provide excellent 2km viewshed coverage for all medium-large species in the Turbine Area and wider areas (inc. the SPA) beyond the final design layout (ES Volume 2: Figure 10.3a). However, the VP locations were also selected to allow VP watches to view to a maximum of 1km covering most of the Turbine Area (ES Volume 2: Figure 10.3b). The 1km viewshed distance covering the Turbine Area was additionally recommended by SNH in initial discussions for two main reasons: (i) due to detectability issues over longer distances highlighted for small waders by the Viking Wind Farm ES, and (ii) so that potential errors in plotting diver flightlines were reduced, allowing greater confidence that diver flight corridors were accurately mapped. Viewsheds were initially drawn by eye in the field, but were subsequently calculated by using ArcView Spatial Analyst 9.3.1 software and then ground-truthed in the field, and amended where necessary.

As a consequence of these considerations, the 2km viewshed provided excellent coverage over the Application Boundary and beyond, well in to the SPA for all medium to large species, but may have under-estimated the flights of small waders (e.g. dunlin and snipe) at greater distances i.e. 1-2km. The 1km viewsheds from the same VP locations provided very good coverage of almost all of the Turbine Area, meaning that the potential under-recording of small waders at 1-2km distances was addressed in the area where turbines were planned. Only Turbine 17 was not well covered by 1km viewsheds, but the 2km viewshed ensured it was covered adequately by 2km viewsheds.

This survey method involves selecting VP locations across the site which provide a good view of the surrounding land, but do not make the observer too conspicuous. Enough VPs must be selected to enable most of the Site, including the appropriate buffer zone, to be seen. SNH guidance recommends that, where possible, VPs should be located outside of the Proposed Development.

This method involved selecting thirteen VP locations to view over the Proposed Development. Given the landform across the Site (and 1km viewshed recommendation), some VP locations were unavoidably placed within the turbine area. The VP locations are provided in Table 1.

From the pre-selected VPs (ES Volume 2: Figure 10.3), the visible area within an 180° arc was scanned for target species over a three hour period. Flights of target species seen from VPs were recorded within three height bands: below turbine height; approx. turbine height; and above turbine height. While these heights may not match the dimensions of turbines exactly, there is a certain amount of error on the part of the fieldworker in estimating heights of birds from a distance, and fieldworkers are practised in estimating heights, and this is regularly reinforced by using a hand-held clinometer on objects of known height. In practice, birds vary their flight height all the time, but it is usually easy to place bird heights within three bands: high flights were invariably well above turbine height.

These height bands were divided into three, which at the time of survey corresponded with turbine models available then and likely to be used:

- Below turbine height (<20m);
- Turbine (danger) height (20-120m); and
- Above turbine height (>120m).

Surveyors were instructed to always put all birds close to 'turbine/danger height' into that height band. Consequently, all birds at or just above the 120m height, which was defined as within 25m of it, i.e. up to 145m were included in the 'turbine height' band. Only where the flight height was judged to be well above the 'turbine height' band were flights recorded on sheets as 'above turbine height'. Thus, flights recorded as above turbine height were above the danger height i.e. >145m. Turbine models used in the wind farm industry have varied in size and even at the time of writing (January 2016) the actual model and size of turbines available in the future at the time of construction is unknown. For the purpose of the ES, the turbines used in this Proposed Development are described in Chapter 3: Project Description as '*17 turbines with a maximum tip height of up to 145m with a generating capacity greater than 50MW*'. Thus, the turbine height bands used to record bird flightlines broadly matches the maximum height of the turbines to be used.

The flightline of a target species of bird was plotted onto a 1:25,000 scale field map and entered into ArcGIS. This was then used (when there were sufficient flightlines) to carryout Collision Risk Assessment (CRA), which is the main tool used to analyse flightlines and potential mortality rates for target species.

Table 1. Vantage Point (VP) Locations and Survey Effort at the Proposed Development

Vantage Point	Grid Reference	Main viewing direction	No. of hours watched (Oct 2010 – Mar 2011)	No. of hours watched (Apr – Sept 2011)	No. of hours watched (Oct 2011 – Mar 2012)	No. of hours watched (Apr – Sept 2012)	Visible area of site & buffer ¹ , ha	Visible area of site & buffer ² , ha
1	451179/ 1183092	NNE	36.5	45	36	45	79	103
2	451050/ 1182895	SW	33	45	39	45	92	104
3	451144/ 1182801	SE	37	45	36	45	102	285
4	449968/ 1181661	NW	36	45	42	48	*	14
5	450288/ 1181570	SE	36	45	39	48	26	146
6	448500/ 1182100	ENE	37	45	39	45	*	*
7	448500/ 1182100	WSW	36	45	42	45	*	*
8	448956/ 1183635	NW	34	45	36	45	*	*
9	449488/ 1184214	ENE	36	45	36	45	15	139
10	449351/ 1184201	NW	42	45	36	45	*	*
11	449146/ 1183404	SE	42	45	36	45	12	151
12	447439/ 1183968	ESE	0	45	36	45	*	*
13	451300/ 1181970	SE	0	45	36	45	130	215

¹) viewing at 1.5m from ground, to sky 20m above ground, azimuth 1km, ²) viewing at 1.5m from ground, to sky 20m above ground, azimuth 2km, *) VP overlooking the surrounding area

Winter walkover surveys

Six winter walkover bird surveys were undertaken that comprised of Brown and Shepherd (1993) surveys conducted between October 2011 and March 2012. The survey area covered was the same as during the breeding season; namely the Study Area, plus a 500m buffer (ES Volume 2: Figure 10.1).

Migration watches

When there is the potential for migration of waterfowl (geese, ducks and swans), SNH guidance (2005; revised 2010) recommends that migration VP watches are undertaken. Waterfowl are usually moderate-large birds and highly visible in flight. Two VPs were selected that provided good panoramic views across the Study Area. The two migration VPs were Mig1 at HU 48655 81676 and Mig2 50041 81672. It was unclear at the outset of surveys whether there would be a migratory component to waterfowl use of the Study Area so an initial series of migration watches (using the two VPs outlined above) were undertaken in spring 2011 during April and May (15 hours for migration surveys at Mig1 and 15 hours for migration surveys at Mig2).

The spring 2011 surveys regularly recorded greylag geese flying in and around the Study Area and so it was decided to undertake a full set of migration watches in autumn 2011 (September-November) and in spring 2012 (March-May). Following SNH guidance (2005; revised 2010), 36 hours of watches for each of the two VPs were undertaken in both the autumn 2011 migration period and spring 2012 migration period (Table 2). The VP watches were mainly (but not exclusively) targeted at dawn and dusk periods, when waterfowl migration was considered most likely to occur. There was no evidence of waterfowl migration, with greylag geese flights considered likely to relate to the rapidly expanding resident Yell population. Consequently, no further migration VPs were undertaken in autumn 2012.

Fieldwork dates

A summary table of fieldwork dates and survey conditions carried out in the Study Area ornithological surveys is provided in Table 2.

Table 2. Beaw Field Wind Farm Ornithology Studies: Dates, Times and Weather Conditions of Surveys

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
20/09/2010	10	09:15	12:15	3	MC	4	NE	Occ. light showers	6
24/09/2010	11	09:35	12:35	3	MC	5-7	NNE	Squally shower	6
24/09/2010	11	12:50	13:20	0.5	MC	5-7	NNE	Squally shower	6
29/09/2010	10	15:25	18:25	3	MC	6	SE	Rain last hour	8
30/09/2010	11	14:15	16:45	2.5	MC	5-6	SE	Drizzle/rain	8
05/10/2010	5	09:30	12:30	3	MC	5	S	0	7
05/10/2010	4	15:40	16:40	1	MC	3	S	Drizzle/rain	8
06/10/2010	11	12:35	15:35	3	MC	5	S	Occ. drizzle	8
07/10/2010	WO	08:15	14:00	5.45	MC	2	SW	0	1
07/10/2010	7	14:20	17:20	3	MC	2-4	SW	0	1
08/10/2010	10	08:30	11:30	3	MC	1	SSE	0	3
08/10/2010	6	12:00	14:00	3	MC	3	SSE	0	1
13/10/2010	11	08:00	11:00	3	MC	2-4	NW	0	8
13/10/2010	4	11:45	13:45	2	MC	3	NW	0	8
13/10/2010	3	14:15	17:15	3	MC	3	NW	0	8
14/10/2010	6	08:30	10:30	2	MC	0	0	Occ. drizzle	8
14/10/2010	10	11:00	14:00	3	MC	2-4	NW	Occ. drizzle	8
16/10/2010	9	11:00	14:00	3	MC	0-5	W	0	3
16/10/2010	8	14:30	17:30	3	MC	3	WSW	0	4
20/10/2010	WO	08:30	14:30	6	MC	3-4	S	0	3
21/10/2010	10	08:30	11:30	3	MC	5	NW	Occ. snow showers	5
21/10/2010	7	12:00	15:00	3	MC	5-6	NW	Occ. showers	6
22/10/2010	1	09:30	12:30	3	MC	4-6	NE	Occ. hail showers	4

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
22/10/2010	11	15:00	18:00	3	MC	5-6	NW	Occ. snow showers	7
23/10/2010	2	12:10	15:10	3	MC	6	NNE	Occ. hail showers	6
26/10/2010	11	07:00	10:00	3	MC	4-6	SSE	Showers	8
26/10/2010	4	10:30	13:30	3	MC	6	SSE	Rain last hour	8
26/10/2010	5	14:30	17:30	3	MC	6	SSE	0	8
27/10/2010	3	09:20	12:20	3	MC	8	W	Showers	8
27/10/2010	1	13:15	16:15	3	MC	5	W	Drizzle/rain	8
27/10/2010	1	16:30	17:00	0.5	MC	5	W	Drizzle/rain	8
28/10/2010	8	09:00	12:00	3	MC	4	SW	0	4
28/10/2010	9	13:00	16:00	3	MC	4	SW	0	5
28/10/2010	6	16:35	17:35	1	MC	3	SW	0	4
30/10/2010	2	09:00	12:00	3	MC	7	SW	Occ. drizzle	8
30/10/2010	6	13:00	14:00	1	MC	7	SW	Occ. showers	5
30/10/2010	10	14:15	17:15	3	MC	7	SW	Occ. showers	8
04/11/2010	11	08:00	11:00	3	MC	6	W	0	3
04/11/2010	4	11:50	14:50	3	MC	6	W	Occ. showers	3
04/11/2010	5	15:10	16:10	1	MC	4	W	Occ. showers	6
05/11/2010	10	09:00	12:00	3	MC	3-5	NNW	Occ. showers	8
05/11/2010	7	13:00	16:00	3	MC	3-5	N	Occ. showers	6
10/11/2010	3	08:00	11:00	3	MC	1	NE	0	8
10/11/2010	2	12:00	15:00	3	MC	1	NW	0	5
10/11/2010	1	15:15	16:45	1.5	MC	1	NW	0	7
12/11/2010	6	08:00	11:00	3	MC	3	NE	Slight drizzle	8
12/11/2010	10	11:45	14:45	3	MC	4	NNE	0	7
12/11/2010	10	15:00	16:00	1	MC	4	NNE	0	7

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
13/11/2010	5	08:30	11:30	3	MC	1	NNE	Occ. showers	4
13/11/2010	11	12:30	15:30	3	MC	4	NE	Occ. showers	5
16/11/2010	1	09:00	11:30	2.5	MC	3	S	0	1
16/11/2010	9	12:35	15:35	3	MC	3	S	0	1
17/11/2010	4	09:00	12:00	3	MC	7	SE	0	4
17/11/2010	11	13:00	16:00	3	MC	7	SE	0	8
22/11/2010	8	09:00	12:00	3	MC	2-4	NE	0	5
22/11/2010	10	13:00	16:00	3	MC	2-4	NE	Occ. showers	6
23/11/2010	7	08:45	11:45	3	MC	3	NE	Occ. showers	6
23/11/2010	6	12:30	15:30	3	MC	4	NE	Occ. heavy snow showers	8
25/11/2010	9	10:00	13:00	3	MC	3	NNE	Occ. snow showers	8
25/11/2010	8	14:00	16:00	2	MC	2-3	NNE	Occ. snow showers	7
26/11/2010	5	10:30	12:30	2	MC	4	NE	Occ. snow showers	5
26/11/2010	11	13:20	16:20	3	MC	5	NE	Occ. heavy snow showers	7
29/11/2010	8	09:35	10:35	1	MC	4	SE	Occ. snow showers	8
29/11/2010	10	10:50	12:50	2	MC	2-4	SE	Occ. snow showers	8
29/11/2010	3	13:30	16:30	3	MC	1	E	Snow showers	8
30/11/2010	2	10:00	13:00	3	MC	1-4	NE	Occ. snow showers	7
30/11/2010	1	13:40	15:40	2	MC	4	ENE	Occ. snow showers	8
06/12/2010	WO	08:00	11:00	3	MC	1	NW	Light snow	8
06/12/2010	7	11:05	14:05	3	MC	1	NW	Light snow	8
10/12/2010	6	09:00	12:00	3	MC	2-3	W	Drizzle/rain	8
10/12/2010	7	12:50	15:50	3	MC	3	W	Drizzle/rain	8
11/12/2010	5	09:00	12:00	3	MC	6	NNW	Showers	6

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
11/12/2010	4	12:50	15:50	3	MC	5	NW	Occ. showers	7
12/12/2010	2	09:45	12:45	3	MC	3	NW	Drizzle/rain	6
12/12/2010	2	13:30	15:30	2	MC	3	NW	0	8
13/12/2010	8	09:15	12:15	3	MC	3	N	Occ. drizzle	8
13/12/2010	9	13:10	15:10	2	MC	3	NW	Occ. drizzle	8
14/12/2010	1	10:00	12:00	2	MC	2-3	NNE	Occ. showers	8
14/12/2010	2	14:10	15:10	1	MC	3	NNE	Occ. showers	5
20/12/2010	WO	09:00	12:00	3	MC	1	NE	Snow showers	8
20/12/2010	6	12:05	15:05	3	MC	1	NE	Snow showers	8
21/12/2010	WO	08:30	11:00	2.5	MC	2-3	NE	Occ. snow showers	5
21/12/2010	5	11:40	14:40	3	MC	2-3	NE	Occ. snow showers	5
23/12/2010	3	09:45	12:45	3	MC	1	NE	0	5
23/12/2010	1	13:30	15:30	2	MC	1	NNE	Occ. snow showers	5
27/12/2010	4	09:00	12:00	3	MC	5	SE	0	8
27/12/2010	3	12:45	15:45	3	MC	4	SE	Occ. showers	8
28/12/2010	1	09:15	11:15	2	MC	6	SE	Showers	8
28/12/2010	8	12:00	15:00	3	MC	5	SE	0	8
30/12/2010	9	10:50	13:50	3	MC	3	NW	0	5
04/01/2011	9	11:40	12:40	1	MC	1	SSW	0	8
04/01/2011	1	13:00	15:00	2	MC	1	S	Occ. drizzle	8
05/01/2011	6	09:35	12:35	3	MC	3	SE	Occ. drizzle	8
05/01/2011	7	14:55	15:55	1	MC	3	SE		
10/01/2011	5	10:30	13:30	3	MC	3	NW	Occ. showers	5
10/01/2011	5	14:15	15:15	1	MC	3	NW	Occ. showers	5
11/01/2011	WO	09:10	14:00	4.50	MC	3		Occ. showers	5

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
12/01/2011	1	09:00	12:00	3	MC	3	SE	0	8
12/01/2011	3	12:45	15:45	3	MC	3	E	Occ. sleet shower	8
15/01/2011	4	09:15	12:15	3	MC	6	E	Showers	8
15/01/2011	6	13:00	15:30	2.5	MC	5	S	0	8
17/01/2011	WO	09:00	13:40	4.40	MC	3		Showers	6
18/01/2011	5	10:00	12:00	2	MC	1	NW	Occ. showers	5
18/01/2011	4	12:30	15:30	3	MC	2-3	NW	Occ. hail showers	6
21/01/2011	9	11:55	14:55	3	MC	3	W	0	2
21/01/2011	6	15:30	16:00	0.5	MC	2-3	W	0	4
22/01/2011	3	09:00	12:00	3	MC	3	NW	0	6
22/01/2011	2	12:45	15:45	3	MC	3	WNW	0	2
23/01/2011	7	08:10	11:10	3	MC	3	NW	0	8
23/01/2011	1	12:30	13:30	1	MC	2	NW	0	7
27/01/2011	9	09:55	12:40	2.75	MC	1-2	SW	0	3
27/01/2011	8	13:25	15:55	2.5	MC	2	SW	0	7
29/01/2011	2	08:30	11:30	3	MC	3	W	0	5
29/01/2011	WO	11:35	13:35	2	MC	3	W	0	5
31/01/2011	8	08:30	11:30	3	MC	4-3	SW	Slight drizzle at first	8
31/01/2011	8	11:45	12:15	0.5	MC	4-3	SW	Slight drizzle at first	8
31/01/2011	7	14:50	16:50	2	MC	4	SW	Occ. drizzle	8
07/02/2011	2	08:20	11:20	3	MC	0-1	E	0	5
07/02/2011	2	11:40	12:40	1	MC	0-1	E	0	5
07/02/2011	1	13:15	16:15	3	MC	0	calm	0	3
10/02/2011	6	10:00	12:00	2	MC	4	SSE	0 until last 15 mins	4
10/02/2011	7	12:40	15:40	3	MC	5-7	SSE	Occ. showers	6

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
10/02/2011	7	15:55	16:55	1	MC	5-7	SSE	Occ. showers	6
16/02/2011	8	08:00	09:50	1.75	MC	3	S	0	6
16/02/2011	6	12:50	13:50	1	MC	0	calm	0	5
18/02/2011	5	09:30	12:30	3	MC	4	SE	0	7
18/02/2011	4	13:05	16:05	3	MC	6-7	SE	Occ. drizzle	8
25/02/2011	6	07:00	10:00	3	MC	5	SW	Slight drizzle	6
25/02/2011	7	10:30	12:30	2	MC	5	SW	0	6
27/02/2011	1	09:00	12:00	3	MC	4	SW	Occ. light showers	5
27/02/2011	3	12:35	14:05	1.5	MC	4	SW	Occ. showers	4
27/02/2011	3	14:20	16:20	2	MC	4	SW	Occ. showers	4
28/02/2011	9	12:00	14:00	2	MC	4	SW	0	2
28/02/2011	9	14:35	16:35	2	MC	4	SW	0	2
01/03/2011	4	08:00	11:00	3	MC	4	SW	0	2
01/03/2011	5	11:40	14:40	3	MC	2	SSW	0	3
05/03/2011	2	12:20	14:20	2	MC	4	NW	0	7
05/03/2011	3	14:50	17:20	2.5	MC	4	NW	0	5
06/03/2011	9	09:00	11:00	2	MC	5	WSW	Occ. drizzle	8
06/03/2011	8	11:35	13:50	2.15	MC	5	WSW	0	8
06/03/2011	10	14:30	17:30	3	MC	4	W	0	7
07/03/2011	10	08:00	11:00	3	MC	6	W	Drizzle	8
07/03/2011	11	11:45	14:45	3	MC	6	S	Drizzle	8
12/03/2011	11	07:00	10:00	3	MC	2	N	Occ. showers	8
12/03/2011	10	10:45	13:45	3	MC	2	N	0	4
12/03/2011	6	14:15	16:15	2	MC	1	N	0	2
12/03/2011	7	16:45	18:45	2	MC	1	N	0	1

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
17/03/2011	4	08:15	11:15	3	MC	5	SW	Slushy rain	8
17/03/2011	11	12:00	14:00	2	MC	3 then 1	SW	0	6
17/03/2011	11	14:30	16:30	2	MC	3 then 1	SW	0	6
18/03/2011	3	13:10	14:10	1	MC	4-5	WSW	0 then heavy shower	6
19/03/2011	8	09:00	12:00	3	MC	4	SW	Occ. showers	7
19/03/2011	7	12:50	14:05	1.25	MC	4	SW	Occ. showers	5
19/03/2011	7	14:20	17:05	2.75	MC	4	SW	Occ. showers	5
19/03/2011	10	18:10	19:10	1	MC	1	NE	0	3
23/03/2011	5	13:00	16:00	3	MC	4	W	Light showers at first	7
23/03/2011	11	16:30	18:30	2	MC	2	WSW	0	5
25/03/2011	1	07:25	08:25	1	MC	2	NE	0	6
25/03/2011	1	08:45	11:45	3	MC	2	NE	0	6
25/03/2011	9	12:40	15:40	3	MC	2	NE	0	6
27/03/2011	3	08:00	11:00	3	MC	3	NW	0	8
27/03/2011	2	11:45	14:45	3	MC	4	NW	0	8
27/03/2011	1	15:00	17:00	2	MC	3	NW	0	8
28/03/2011	5	08:00	11:00	3	MC	2	SW	0	5
28/03/2011	4	11:35	14:35	3	MC	3	SW	Rain from 1310	8
29/03/2011	9	09:05	12:05	3	MC	2	NE	0	3
29/03/2011	8	13:50	16:50	3	MC	2	NE	0	4
30/03/2011	6	11:30	14:30	3	MC	4	SW	0	8
30/03/2011	6	15:15	16:15	1	MC	4	SW	0	8
30/03/2011	10	16:30	18:30	2	MC	4	SW	0	7
31/03/2011	3	13:40	16:40	3	MC	2	S	Occ. drizzle	8
01/04/2011	WO	09:10	15:00		MC	1	S	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
01/04/2011	2	15:45	18:45	3	MC	1	S	0	8
02/04/2011	Mig1	08:00	11:00	3	MC	2	SSW	0	7
02/04/2011	Mig2	11:30	14:30	3	MC	4	SW	rain	8
06/04/2011	Mig2	08:00	11:00	3	MC	5	W	occ. drizzle	3
06/04/2011	Mig1	11:45	14:45	3	MC	4	W	0	2
13/04/2011	WO	08:15	11:15	3	KC	4	SW	0	3
13/04/2011	7	11:30	14:30	3	KC	4	SW	0	3
14/04/2011	WO	08:30	12:15	3.45	KC	3-5	SW	Showers	8
14/04/2011	8	12:35	15:35	3	KC	3-5	SW	Heavy showers	8
15/04/2011	WO	09:25	11:25	2	KC	4	SW	0	6
15/04/2011	2	11:15	14:15	3	KC	4	SW	0	6
15/04/2011	3	14:45	17:45	3	KC	5-7	SW	0	8
16/04/2011	WO	08:30	10:30	2	KC	5-6	W	0	8
16/04/2011	11	10:55	13:55	3	KC	5-6	W	0	8
17/04/2011	Mig2	14:25	17:25	3	MC	7	W	0	6
18/04/2011	9	10:30	13:30	3	KC	3-4	SW	0	2
18/04/2011	10	14:15	17:15	3	KC	4	SW	0	1
20/04/2011	5	10:00	13:00	3	KC	4	S	0	8
20/04/2011	4	13:45	16:45	3	KC	5-6	SW	0	8
21/04/2011	12	11:00	14:00	3	KC	3-4	W	0	7
21/04/2011	6	14:30	17:30	3	KC	4-5	SW	0	6
22/04/2011	7	13:20	16:20	3	MC	4	SW	0	5
23/04/2011	13	12:00	15:00	3	KC	4-6	SE	0	3
23/04/2011	Mig1	15:30	17:30	2	KC	5-6	SE	0	8
25/04/2011	1	11:00	14:00	3	KC	5-7	SW	0	5

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
25/04/2011	Mig2	15:00	18:00	3	KC	5	SW	0	2
27/04/2011	8	09:30	12:30	3	MC	3	S	0	3
27/04/2011	Mig1	13:15	16:15	3	MC	3	S	0	2
27/04/2011	6	16:45	19:45	3	MC	3	S	0	4
30/04/2011	4	09:30	12:30	3	MC	3	SE	0	1
30/04/2011	5	13:15	16:15	3	MC	3	SE	0	1
30/04/2011	Mig1	16:30	17:30	1	MC	4	ENE	0	2
05/05/2011	13	11:00	14:00	3	KL&KC	2	SE	0	8
05/05/2011	3	14:45	17:45	3	KL	2	SE	0	8
05/05/2011	2	14:50	17:50	3	KC	2	SE	0	6
07/05/2011	12	08:00	11:00	3	KC	4	S	Showers	8
07/05/2011	11	8:00	11:00	3	KL	3-5	SE	0	8
07/05/2011	10	11:45	14:45	3	KC	6-7	SW	0	8
07/05/2011	9	11:50	14:50	3	KL	6-8	SE	0	8
07/05/2011	1	15:15	18:15	3	KL&KC	3	SE	0	8
09/05/2011	WO	07:30	13:15	5.45	KC	3	S	0	8
09/05/2011	WO	07:45	14:00	6.15	KL	3	S	0	8
09/05/2011	7	13:40	16:40	3	KC	3	S	0	8
11/05/2011	Mig2	07:00	10:00	3	KC	3	S	Some light rain	7
11/05/2011	1	07:15	10:15	3	KL	1	S	Light rain shower	8
11/05/2011	5	10:45	13:45	3	KC	2	S	Constant light rain	8
11/05/2011	2	11:00	14:00	3	KL	1-2	SE	Light rain	8
11/05/2011	4	14:15	17:15	3	KC	2	S	0	2
11/05/2011	3	14:30	17:30	3	KL	4	SSE	0	4
12/05/2011	Mig1	07:25	10:25	3	KC	3	S	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
12/05/2011	13	07:25	10:25	3	KL	2	SE	0	8
14/05/2011	7	08:40	11:40	3	DH	5-6	NE	Constant drizzle rain	8
18/05/2011	WO	09:00	14:00	5	PC	5	SW	0	8
18/05/2011	11	14:20	17:20	3	PC	5	SW	0	8
19/05/2011	8	08:00	11:00	3	PC	5-6	SW	Occ. showers	6
19/05/2011	9	11:40	14:40	3	PC	6-7	SW	Occ. showers	8
19/05/2011	10	15:00	18:00	3	PC	5-6	SW	Occ. showers	8
20/05/2011	6	08:00	11:00	3	PC	3	SW	Light drizzle	8
20/05/2011	12	11:45	14:45	3	PC	3	SW	Light drizzle	8
20/05/2011	7	15:15	18:15	3	PC	4	SW	Occ. showers	8
21/05/2011	4	09:00	12:00	3	PC&DH	6-7	SW	0	6
21/05/2011	5	12:45	15:45	3	DH	6-7	SW	0	2
23/05/2011	13	07:55	10:55	3	DH	5-6	SW	0	5
23/05/2011	3	11:40	12:40	1	DH	6-7	SE	Constant drizzle	8
23/05/2011	3	13:00	15:00	2	DH	6-7	SE	Persistent rain	8
24/05/2011	12	08:00	11:00	3	DH	6-7	W	0	7
24/05/2011	11	11:50	14:50	3	DH	6-7	WSW	Periodic heavy rain showers	6
25/05/2011	1	08:45	11:45	3	DH	5	WNW	0	8
25/05/2011	2	12:30	15:30	3	DH	4-2	WSW	0	8
28/05/2011	WO	08:00	14:00		DH	5	SW	0	8
28/05/2011	8	14:25	17:25	3	DH	5-6	SW	0	8
30/05/2011	9	09:00	12:00	3	DH	5	WSW	0	4
30/05/2011	10	12:45	15:45	3	DH	5	WSW	0	5
01/06/2011	WO	06:10	10:30	4.20	DH	5	W	0	

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
02/06/2011	WO	06:00	09:20	3.20	DH	5	WSW	Drizzly	8
02/06/2011	7	09:25	12:25	3	DH	5	WSW	Drizzly	8
06/06/2011	5	07:15	10:15	3	DH	3	NNE	0	8
06/06/2011	4	11:00	14:00	3	DH	3	NE	0	8
07/06/2011	2	07:30	10:30	3	DH	3	NW	Shower at 0825	8
07/06/2011	13	11:25	14:25	3	DH	3	NW	Drizzle	8
07/06/2011	6	15:00	18:00	3	DH	2	NW	0	8
08/06/2011	WO	06:15	08:30	2.15	DH	5	E	0	8
08/06/2011	3	08:40	11:40	3	DH	5	E	0	8
09/06/2011	11	09:05	12:05	3	DH	4	ESE	0	8
09/06/2011	1	13:00	16:00	3	DH	3-4	SE	0	4
10/06/2011	8	08:30	11:30	3	DH	1-2	NE	0	2
10/06/2011	12	12:15	15:15	3	DH	3	NW	0	6
13/06/2011	10	08:00	11:00	3	DH	4	E	0	8
13/06/2011	9	11:40	14:40	3	DH	4-5	ENE	0	8
14/06/2011	7	05:10	08:10	3	PC	8	NE	Rain	8
14/06/2011	6	09:00	12:00	3	PC	8	NE	Rain	8
15/06/2011	2	03:20	06:20	3	PC	3	0	0	1
15/06/2011	1	06:40	09:40	3	DH	2-3	E	0	7
15/06/2011	3	07:00	10:00	3	PC	2	SE	0	5
15/06/2011	13	11:10	14:10	3	DH	3-4	SE	0	8
15/06/2011	4	19:25	22:25	3	PC	3	SE	0	8
16/06/2011	WO	06:15	11:30	5.15	PC				
16/06/2011	WO	06:30	11:10	4.40	DH	2	S	0	3
17/06/2011	WO	09:40	11:40	2	DH	1-2	S	0	3

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
17/06/2011	5	11:45	14:45	3	DH	1-2	S	0	3
20/06/2011	6	06:25	09:25	3	DH	3	NE	0	8
20/06/2011	8	15:55	18:55	3	DH	4	NNW	0	8
21/06/2011	10	03:55	06:55	3	DH	1-2	N	0	8
21/06/2011	9	07:30	10:30	3	DH	1-2	N	0	8
21/06/2011	12	18:40	21:40	3	DH	3	ENE	0	8
22/06/2011	5	07:00	10:00	3	KC	4	0	4	3
22/06/2011	4	10:45	13:45	3	KC	4	N	Showers	7
23/06/2011	11	09:10	12:10	3	DH	4	NW	0	8
23/06/2011	13	15:00	18:00	3	KC	3-4	N	Showers	6
24/06/2011	3	12:00	15:00	3	KC	1-2	NW	0	8
24/06/2011	1	15:45	18:45	3	KC	2	NW	0	7
26/06/2011	Diver	11:20	17:25	6	DH	4	NW	0	8
27/06/2011	11	09:00	12:00	3	KC	2-3	S	0	8
27/06/2011	9	09:05	12:05	3	NR	3	SW	0	6
27/06/2011	8	12:45	15:45	3	KC	3	SW	0	6
27/06/2011	10	12:50	15:50	3	NR	2-3	SE	0	7
27/06/2011	12	16:30	19:30	3	KC	2-3	S	0	8
27/06/2011	6	16:30	19:30	3	NR	1-2	SW	0	8
29/06/2011	2	06:20	09:20	3	NR	0-2	W	0	5
04/07/2011	4	06:00	09:00	3	DH	0-1	W	0	1
04/07/2011	Diver	06:50	09:50	3	NGR	1	W	0	1
04/07/2011	Diver	07:00	15:00	8	KC	1	W	0	1
04/07/2011	5	09:45	12:45	3	DH	2	ENE	0	3
04/07/2011	Diver	10:15	15:25	5.25	NGR	1	W	0	1

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
04/07/2011	13	13:30	16:30	3	DH	2	ESE	0	3
05/07/2011	2	04:50	07:50	3	DH	3-4	ENE	0	7
05/07/2011	Diver	05:45	14:15	8.5	NGR	4	E	0	5
05/07/2011	Diver	06:00	14:00	8	KC	4	E	0	5
05/07/2011	1	08:30	11:30	3	DH	3-4	ENE	0	7
05/07/2011	3	12:00	15:00	3	DH	4	E	0	8
06/07/2011	7	09:30	12:30	3	DH	4-5	SE	0	8
06/07/2011	6	13:10	16:10	3	DH	4	SE	Light drizzle	8
07/07/2011	Diver	08:15	15:50	7.5	DH	3-4	SE	0	7
08/07/2011	Diver	06:20	16:20	10	NGR	3	SE	0	8
08/07/2011	Diver	06:40	15:40	9	KC	3	SE	0	8
11/07/2011	5	08:30	11:30	3	DH	3-4	NNW	0	8
11/07/2011	6	12:25	15:25	3	DH	3-4	NW	Drizzle	8
13/07/2011	1	10:30	13:30	3	DH	2-3	NE	0	8
13/07/2011	3	10:30	13:30	3	RWP	0-2	N	0	8
13/07/2011	2	14:15	17:15	3	DH	2	ENE	0	8
13/07/2011	13	14:20	17:20	3	RWP	0-2	NE	0	8
14/07/2011	Diver	12:20	20:20	8	RWP	1-4	S	0	2
15/07/2011	4	08:55	11:55	3	DH	3	SE	0	3
15/07/2011	Diver	17:05	20:05	3	RWP	1-4	SSE	0	8
18/07/2011	12	09:00	12:00	3	DH	3-4	ESE	0	4
18/07/2011	Diver	09:35	18:35	9	RWP	1-3	NW/N	0	5-8
18/07/2011	7	12:45	15:45	3	DH	3-4	WNW	0	8
18/07/2011	10	13:00	16:00	3	NGR	4	E	0	8
18/07/2011	9	16:30	19:30	3	DH	5	ENE	Drizzle	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
19/07/2011	8	07:00	10:00	3	DH	4-5	N	Drizzle	8
19/07/2011	Diver	07:40	09:30	2	RWP	1-4	N	Clear, light drizzle	8
19/07/2011	Diver	10:00	15:45	5.75	RWP	2-4	N	Light rain	8
19/07/2011	11	10:45	13:45	3	DH	4-5	N	Drizzle	8
19/07/2011	6	14:30	17:30	3	DH	4-5	N	Drizzle	8
20/07/2011	2	08:00	11:00	3	DH	4	N	Drizzle	8
20/07/2011	Diver	08:40	17:00	8.25	RWP	1-4	NNW	0	8
20/07/2011	1	11:40	14:40	3	DH	4	NW	0	8
20/07/2011	5	15:15	18:15	3	DH	3-4	NW	Drizzle	8
21/07/2011	7	09:00	12:00	3	DH	2-3	NW	Drizzle	7
21/07/2011	Diver	09:15	10:35	1.25	RWP	1-4	N	Light rain	7
21/07/2011	Diver	11:20	14:50	3.5	RWP	1-4	N	0	6
21/07/2011	4	12:45	15:45	3	DH	4	NW	0	8
21/07/2011	Diver	17:20	19:20	2	RWP	1-3	N	Light drizzle	8
23/07/2011	Diver	11:20	18:30	7	RWP	2-5	NE->N	Rain	8
24/07/2011	Diver	07:50	17:15	9.5	RWP	3-6	N	Rain	8
26/07/2011	Diver	09:55	18:00	8	RWP	1-4	N	Light rain	8
27/07/2011	Diver	09:10	13:20	4	DH	2	ESE	0	8
27/07/2011	11	15:20	18:20	3	DH	2-3	SSE	0	8
28/07/2011	9	07:10	10:10	3	DH	2-3	S	0	8
28/07/2011	12	12:40	15:40	3	DH	3-4	N	Drizzle	8
29/07/2011	10	07:00	10:00	3	DH	3-4	NW	0	8
29/07/2011	9	10:45	13:45	3	DH	3	NW	0	7
29/07/2011	8	14:20	17:20	3	DH	3	NW	0	6
30/07/2011	11	09:00	12:00	3	DH	2	NW	Drizzle	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
30/07/2011	3	12:45	15:45	3	DH	2	NW	0	8
30/07/2011	13	16:15	19:15	3	DH	2	NE	0	8
31/07/2011	10	09:00	12:00	3	DH	2-3	NE	0	8
31/07/2011	8	12:45	15:45	3	DH	2-3	NE	0	8
31/07/2011	12	16:30	19:30	3	DH	3	SE	0	7
01/08/2011	Diver	10:30	16:15	5.75	DH	4-5	SE	Light drizzle	8
09/08/2011	Diver	09:55	17:55	8	MS	5-6	NNW	Occ. heavy showers	8
10/08/2011	Diver	09:32	18:45	9.25	MD	4-5	N->E->NE	0	1
15/08/2011	4	09:30	12:30	3	DH	3-4	S	0	5
15/08/2011	5	13:15	16:15	3	DH	3-4	S	0	6
16/08/2011	1	08:30	11:30	3	DH	0-1	NE	0	6
16/08/2011	3	12:15	15:15	3	DH	2	E	0	3
16/08/2011	2	16:00	19:00	3	DH	2-3	E	0	6
17/08/2011	13	08:00	11:00	3	DH	0-1	E	0	5
17/08/2011	7	12:00	15:00	3	DH	1-2	SE	0	4
18/08/2011	11	07:15	10:15	3	DH	1-2	W	0	7
18/08/2011	10	10:55	13:55	3	DH	2	W	0	8
18/08/2011	9	14:35	17:35	3	DH	0-1	W	0	8
19/08/2011	5	08:00	11:00	3	DH	2	E	0	2
19/08/2011	4	11:40	14:40	3	DH	0	0	0	8
19/08/2011	6	15:30	18:30	3	DH	1	S	0	7
20/08/2011	2	10:00	13:00	3	DH	4	SW	0	8
20/08/2011	1	14:00	17:00	3	DH	3-4	SW	0	6
22/08/2011	8	08:15	11:15	3	DH	3-4	WNW	Drizzle	8
22/08/2011	12	12:10	15:10	3	DH	4	WNW	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
23/08/2011	7	05:50	08:50	3	DH	0	0	0	7
23/08/2011	3	09:35	12:35	3	DH	0	0	0	6
23/08/2011	13	13:25	16:25	3	DH	2	SE	0	3
24/08/2011	9	08:30	11:30	3	DH	3-4	NE	Drizzle	8
24/08/2011	10	12:15	15:15	3	DH	3	NE	Drizzle	8
25/08/2011	6	08:00	11:00	3	DH	3	SE	0	7
25/08/2011	8	11:50	14:50	3	DH	3	SSE	0	4
25/08/2011	7	15:30	18:30	3	DH	3	S	0	8
26/08/2011	12	08:00	11:00	3	DH	1	N	0	2
26/08/2011	9	12:00	15:00	3	DH	2	NE	0	8
26/08/2011	10	15:45	18:45	3	DH	0-1	NW	0	8
27/08/2011	6	12:00	15:00	3	DH	0	0	Persistent rain	8
27/08/2011	4	15:45	18:45	3	DH	6	N	Persistent rain, very wet	8
29/08/2011	3	08:00	11:00	3	DH	5-6	NW	Drizzle	8
29/08/2011	2	11:55	14:55	3	DH	6	NW	Occ. drizzle, heavier showers	8
29/08/2011	1	15:40	18:40	3	DH	5-6	NW	0	8
30/08/2011	11	08:00	11:00	3	DH	3-4	NW	0	8
30/08/2011	8	11:55	14:55	3	DH	4	NW	0	7
30/08/2011	11	15:30	18:30	3	DH	4	NW	0	8
31/08/2011	5	08:00	11:00	3	DH	3	NW	0	8
31/08/2011	13	11:40	14:40	3	DH	3	NW	0	8
31/08/2011	12	15:25	18:25	3	DH	3	NW	0	5
06/09/2011	6	08:00	11:00	3	DH	3-4	SE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
06/09/2011	7	11:45	14:45	3	DH	3	SE	Constant heavy drizzle, low mist	8
07/09/2011	4	13:00	16:00	3	DH	5	SW	0	5
07/09/2011	5	16:45	19:45	3	DH	4	SW	0	4
08/09/2011	3	10:00	13:00	3	DH	4	W	0	8
08/09/2011	1	13:45	16:45	3	DH	4-5	WSW	0	8
09/09/2011	13	06:00	09:00	3	DH	1	SW	0	8
09/09/2011	2	09:50	12:50	3	DH	2	WSW	0	5
09/09/2011	11	13:30	16:30	3	DH	3	WSW	0	8
12/09/2011	8	08:30	11:30	3	DH	3-4	SE	0	8
12/09/2011	6	12:25	15:25	3	DH	4-5	SE	0	8
13/09/2011	1	09:20	12:20	3	DH	3-4	NW	0 at 09:20	8
13/09/2011	12	14:10	17:10	3	DH	4	NW	0	8
14/09/2011	Mig1	05:15	07:15	2	DH	5-6	NW	Drizzly	8
14/09/2011	7	08:00	11:00	3	DH	5	NW	0	7
14/09/2011	9	11:50	14:50	3	DH	5-6	NW	Drizzly	8
15/09/2011	5	12:00	15:00	3	DH	3-4	NW	0	8
15/09/2011	4	15:40	18:40	3	DH	3-4 + >	NW	Very light drizzle at beginning	4
15/09/2011	Mig2	19:10	21:10	2	DH	2-3	NW	0	8
16/09/2011	11	09:00	12:00	3	DH	3-4	S	0	6
16/09/2011	10	12:45	15:45	3	DH	4-5	SE	0	8
19/09/2011	13	09:00	12:00	3	DH	2 occ 3-4	NW	0	2
19/09/2011	2	12:45	15:45	3	DH	2	SE	0	2
20/09/2011	10	10:00	13:00	3	DH	6	SW	0	5

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
20/09/2011	9	13:45	16:45	3	DH	6	WSW	0	5
20/09/2011	Mig1	18:10	20:10	2	DH	4	W	Occ. heavy showers	8
21/09/2011	Mig2	05:45	07:45	2	DH	4-5 occ 6	SW	Light drizzle	8
21/09/2011	12	08:30	11:30	3	DH	5 occ. 6	SSW	Drizzle	8
21/09/2011	3	12:30	15:30	3	DH	5	S	Drizzle, sometimes heavy	8
22/09/2011	Mig1	05:45	07:45	2	DH	4 occ 5	NW	Occ. drizzle	6
22/09/2011	8	12:25	15:25	3	DH	6 occ 7	W	Heavy showers	6
22/09/2011	Mig2	18:05	20:05	2	DH	5-6	W	0	8
26/09/2011	WO	12:30	15:00	2.30	DH	4	NW	0	8
27/09/2011	WO	08:30	15:00	6.30	DH	4	SSW	0	6
28/09/2011	Mig1	06:05	08:05	2	DH	2-3	S	Drizzle	5
28/09/2011	WO	08:35	11:35	3	DH	5	S	0	6
28/09/2011	Mig1	18:00	20:00	2	DH	5	S	0	4
29/09/2011	WO	09:30	13:45	4.15	DH	3	SSE	0	5
29/09/2011	Mig2	17:45	19:45	2	DH	3	SSE	0	7
30/09/2011	Mig2	06:05	09:05	2	DH	2-3	S	0	8
03/10/2011	6	08:00	11:00	3	DH	5	SW	Constant rain	8
03/10/2011	5	11:45	14:45	3	DH	6-7	SSW	Drizzle	8
04/10/2011	1	10:00	13:00	3	DH	7-8	SW	Occ. heavy showers	8
04/10/2011	4	13:45	16:45	3	DH	7	SW	Occ. heavy showers	5
04/10/2011	Mig1	17:30	19:30	2	DH	7	SW	Occ. heavy down pour	5
05/10/2011	Mig1	06:00	08:00	2	DH	4	SW	0	8
05/10/2011	10	08:30	11:30	3	DH	4	SW	Drizzle	8
05/10/2011	9	12:20	15:20	3	DH	3-4	SW	Persistent light rain	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
05/10/2011	Mig2	17:25	19:25	2	DH	4	W	0	8
06/10/2011	Mig2	06:00	08:00	2	DH	4-5	W	Mainly dry, occ. heavy squally shower	4
06/10/2011	3	08:40	11:40	3	DH	4-5	W	Occ. heavy showers, bright in between	6
06/10/2011	2	12:30	15:30	3	DH	5	WNW	Squally showers	7
07/10/2011	8	10:00	13:00	3	DH	7-8	NW	Occ. showers, mainly dry	7
07/10/2011	11	13:45	16:45	3	DH	7	NW	0	8
10/10/2011	12	09:50	12:50	3	DH	4-5	NW	Shower but mainly bright	7
10/10/2011	13	13:35	16:35	3	DH	5	NW	Mainly dry, occ. heavy showers	5
11/10/2011	Mig2	06:35	08:35	2	DH	5-6	W	0	4
11/10/2011	7	13:30	16:30	3	DH	6-7	WNW	0	8
11/10/2011	Mig2	17:10	19:10	2	DH	6	NW	Frequent short heavy showers	8
12/10/2011	Mig1	06:35	08:35	2	DH	3	NE	0	8
12/10/2011	WO	11:30	14:00	2.30	DH	3	NE	0	2
12/10/2011	WO	15:00	16:00	1	DH	3	NE	0	2
12/10/2011	Mig2	17:05	19:05	2	DH	2-3	NE	0	2
13/10/2011	WO	09:45	13:00	3.15	DH	3-4	SW	0	2
13/10/2011	1	13:15	16:15	3	DH	3-4	S	0	8
14/10/2011	WO	10:00	13:00	3	DH	4	SW	0 > persistent rain	8
17/10/2011	3	08:35	11:35	3	DH	6	SW	0	7

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
17/10/2011	6	13:30	16:30	3	DH	6	SW	0	8
17/10/2011	Mig1	17:00	19:00	2	DH	5-6	SW	0	8
18/10/2011	Mig2	06:30	08:30	2	DH	3-4	SW	Showery	8
18/10/2011	5	09:15	12:15	3	DH	9	WSW	Heavy showers	8
18/10/2011	8	13:00	16:00	3	DH	4-5	NW	Occ. showers	7
19/10/2011	13	11:00	14:00	3	DH	7	NW	Hail, sleety showers	8
19/10/2011	2	14:55	17:55	3	DH	6	NW	0	6
20/10/2011	Mig2	06:30	08:30	2	DH	2	NW	0	7
20/10/2011	4	09:15	12:15	3	DH	3-4	NW	Light drizzle	8
20/10/2011	Mig2	16:40	18:40	2	DH	4	SSW	0	7
21/10/2011	7	10:20	13:20	3	DH	4	S	Persistent light rain	8
24/10/2011	10	09:00	12:00	3	DH	6-8	SE	0	8
24/10/2011	12	12:45	15:45	3	DH	6-7	SE	0	8
25/10/2011	11	09:25	12:25	3	DH	6-8	SE	0	8
26/10/2011	Mig1	07:10	09:10	2	DH	6-8	SE	Persistent light rain, occ. heavy	8
26/10/2011	7	11:50	14:50	3	DH	6-8	SE	Persistent, occ. heavy	8
26/10/2011	Mig1	16:30	18:30	2	DH	6-7	SE	Persistent rain, often heavy	8
27/10/2011	Mig2	07:00	09:00	2	DH	4-6	SW	Very heavy showers at first	8
27/10/2011	9	09:40	12:40	3	DH	5-7	S	0	7
27/10/2011	Mig2	16:20	18:20	2	DH	5-7	S	0	5
28/10/2011	WO	09:00	15:00		DH	4	SW	Brief showers	5 occ. 7
31/10/2011	5	08:00	11:00	3	DH	4	S	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
31/10/2011	4	12:00	15:00	3	DH	4	S	0	8
31/10/2011	Mig1	15:30	17:30	2	DH	4	S	0	8
01/11/2011	6	09:00	12:00	3	DH	3	S	0	8
01/11/2011	7	12:50	15:50	3	DH	3	S	0	8
02/11/2011	Mig1	06:00	08:00	2	DH	4-5	S	0	8
02/11/2011	1	08:50	11:50	3	DH	4	S	0	7
02/11/2011	3	12:30	15:30	3	DH	5-6	S	0	8
02/11/2011	Mig2	16:20	18:20	2	DH	6-7	S	0	8
03/11/2011	Mig2	06:35	08:35	2	DH	7	SE	0	8
03/11/2011	4	09:50	12:50	3	DH	6-7	SE	Drizzly	8
04/11/2011	13	09:20	12:20	3	DH	5-6	SE	Constant heavy rain	8
04/11/2011	6	13:50	16:50	3	DH	5-6	SE	Persistent heavy rain	8
08/11/2011	8	09:00	12:00	3	DH	5	S	0	8
08/11/2011	11	13:00	16:00	3	DH	5-6	SE	0	8
09/11/2011	Mig1	06:50	08:50	2	DH	5	SSE	0	8
09/11/2011	WO	09:05	10:50	1.45	DH	5	S	Drizzly	8
09/11/2011	12	11:05	14:05	3	DH	5-6	S	Persistent light drizzle	8
09/11/2011	WO	14:20	15:05	0.45	DH	5	S	Drizzly	8
09/11/2011	Mig1	15:20	17:20	2	DH	5-6	SSE	Drizzly, persistent	8
10/11/2011	Mig2	06:15	08:15	2	DH	5-6	SSE	Drizzly	8
10/11/2011	5	09:05	12:05	3	DH	6-7	SSE	0	8
10/11/2011	Mig1	14:40	16:40	2	DH	5-6	SSE	Drizzly	8
15/11/2011	WO	08:00	09:00	1	DH	4-5	SE	0	8
15/11/2011	9	09:15	12:15	3	DH	4-5	SE	0	8
15/11/2011	10	13:30	16:30	3	DH	4-5	SE	0	2

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
16/11/2011	Mig1	07:10	09:10	2	DH	5	S	0	8
16/11/2011	2	11:10	14:10	3	DH	4-5	SE	0	8
16/11/2011	Mig1	15:00	17:00	2	DH	5	SE	0	8
17/11/2011	3	09:00	12:00	3	DH	5-6	SSE	0	8
17/11/2011	1	12:45	15:45	3	DH	5-6	SSE	0	8
18/11/2011	WO	09:30	10:30		DH	4-5	SW	Rain	8
19/11/2011	WO	10:00	12:00		DH	3	S	0	5
21/11/2011	7	08:00	11:00	3	DH	4-5	SW	0	8
21/11/2011	4	11:55	14:55	3	DH	4-5	S	0	8
22/11/2011	11	09:00	12:00	3	DH	3	S	Very light drizzle	8
22/11/2011	8	12:45	15:45	3	DH	3	S	0	5
23/11/2011	2	09:10	12:10	3	DH	6-7	SW	Occ. showers	7
23/11/2011	WO	12:25	12:50		DH	5	SW	0	8
23/11/2011	13	13:05	16:05	3	DH	6-7	SW	Occ. showers	6
24/11/2011	WO	08:15	09:45		DH	3-4	SW	0	8
24/11/2011	12	10:00	13:00	3	DH	3-4	SW	0	8
25/11/2011	5	11:55	14:55	3	DH	6-8	SW	Occ. heavy showers, hail showers	4
28/11/2011	WO	08:15	15:00	6.45	DH	4-5	SW	Occ. light drizzle	8
29/11/2011	WO	08:30	09:00	0.5	DH	5	SW	Wet; persistent rain	8
29/11/2011	10	09:15	12:15	3	DH	4	S	Steady rain	8
29/11/2011	9	13:00	16:00	3	DH	4-5	S	Persistent drizzle at time	8
01/12/2011	WO	13:30	15:30	2	DH	5-6	SW	Drizzly	8
02/12/2011	5	08:00	11:00	3	DH	4	WSW	0	6

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
02/12/2011	4	11:45	14:45	3	DH	5-6	S	Occ. heavy sleet	8
03/12/2011	6	09:00	12:00	3	DH	7	NW	Frequent heavy showers	1
03/12/2011	7	12:45	15:45	3	DH	6-7	NW	Frequent heavy sleet showers	8
04/12/2011	6	12:30	15:30	3	DH	3	SW	Showery	8
04/12/2011	WO	08:00	12:30	4.30	DH	5	SW	0	8
05/12/2011	WO	08:00	09:00	1	DH	5-6	NW	0	7
05/12/2011	8	09:05	12:05	3	DH	5-6	NW	0	7
05/12/2011	11	12:20	15:20	3	DH	5	NW	0	7
05/12/2011	WO	15:30	16:30	1	DH	5	NW	0	7
06/12/2011	WO	08:00	08:30	0.30	DH	5	NW	Snow showers	8
06/12/2011	1	08:30	11:30	3	DH	6-7	NW	Wintry showers	8
06/12/2011	2	12:15	15:15	3	DH	6-7	NW	Frequent wintry showers	8
06/12/2011	WO	15:15	16:20	1.05	DH	5	NW	Snow showers	8
07/12/2011	WO	08:00	11:40	3.40	DH	3-4	NW	0	8
07/12/2011	3	11:40	14:40	3	DH	4, occ. 5	ESE	Occ. heavy	7
07/12/2011	WO	14:50	16:00	1.10	DH	4	NW	showers	8
08/12/2011	13	08:25	11:25	3	DH	3-4	NE	0	8
08/12/2011	WO	11:30	12:15	0.45	DH	3-4	NW	Snow -> rain	4-5
08/12/2011	12	12:15	15:15	3	DH	6-8	SE	Persistent heavy rain	8
09/12/2011	9	09:00	12:00	3	DH	4	SE	Showery but bright	7
10/12/2011	10	09:00	12:00	3	DH	6-7	SE	Occ. wintry showers	8
12/12/2011	WO	12:00	12:30	0.30	DH	4	SW	Snowy	7
13/12/2011	4	08:15	11:15	3	DH	5	SW	Showery	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
13/12/2011	5	12:05	15:05	3	DH	5	SSW	0	5
14/12/2011	3	09:00	12:00	3	DH	5	SW	Showery	8
14/12/2011	13	12:50	15:50	3	DH	7	WSW	0	7
15/12/2011	11	08:20	12:20	3	DH	4	NW	Occ. light showers	7
15/12/2011	10	12:10	15:10	3	DH	5	NW	0	7
16/12/2011	7	08:00	11:00	3	DH	3-4	NW	0	6
16/12/2011	8	11:50	14:50	3	DH	4, occ. 5	NW	Bright and clear	8
17/12/2011	WO	09:10	12:40	3.30	DH	5	NW	Snow + hail	7
19/12/2011	WO	08:15	11:30	3.15	DH	1	S	0	5
19/12/2011	9	11:30	14:30	3	DH	1-2	S	0	5
19/12/2011	WO	14:30	15:30	1	DH	1	S	0	5
20/12/2011	2	09:00	12:00	3	DH	5	WNW	0	4
20/12/2011	1	12:45	15:45	3	DH	4-5	W	0	6
21/12/2011	WO	08:15	09:30	1.15	DH	0-2	S	0	5
21/12/2011	12	09:30	12:30	3	DH	0-2	SW	0	8
21/12/2011	WO	12:30	15:30	3	DH	4-5	SW	Light rain	8
04/01/2012	4	08:30	11:30	3	DH	5	NW	0	7
04/01/2012	5	12:10	15:10	3	DH	4-5	WNW	0	4
05/01/2012	7	08:30	11:30	3	DH	6-7	NW	Frequent heavy hail showers	8
05/01/2012	6	12:10	15:10	3	DH	6-7	NW	0	6
06/01/2012	1	08:30	11:30	3	DH	3	W	0	8
06/01/2012	3	12:20	13:20	3	DH	3	SW	0	8
09/01/2012	9	08:20	11:20	3	DH	6-7	W	0	8
09/01/2012	11	12:20	15:20	3	DH	6-7	W	0	6

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
10/01/2012	13	08:30	11:30	3	DH	4	SW	0	8
10/01/2012	2	12:15	15:15	3	DH	4	SW	Light rain	8
11/01/2012	12	09:00	12:00	3	DH	5	WNW	Very occ. light showers	5
11/01/2012	7	12:40	15:40	3	DH	6	W	0	8
12/01/2012	5	09:00	12:00	3	DH	6-7	NW	Frequent sleet showers, sometimes snow	6
12/01/2012	4	12:45	15:45	3	DH	6-7	NW	Frequent sleet showers	8
13/01/2012	10	09:05	12:05	3	DH				
13/01/2012	8	12:50	15:50	3	DH	4	NNW	0	5
16/01/2012	WO	08:15	15:00	6.45	DH	3	SW	0	6
17/01/2012	11	08:30	11:30	3	DH	1-3	SSW	0	7
17/01/2012	9	12:10	15:10	3	DH	4	SSW	Light rain	8
18/01/2012	3	09:00	12:00	3	DH	6-7	W	Showery	8
18/01/2012	1	12:40	15:40	3	DH	6	WSW	Occ. wintry showers	8
19/01/2012	2	08:15	11:15	3	DH	5	WSW	Wintry shower	7
19/01/2012	13	12:00	15:00	3	DH	6	W	Occ. wintry showers	8
20/01/2012	6	08:15	11:15	3	DH	3-4	W	Light rain	8
20/01/2012	12	12:00	15:00	3	DH	3	NW	0	6
23/01/2012	8	08:30	11:30	3	DH	2	W	0	7
23/01/2012	10	12:10	15:10	3	DH	4	WNW	0	6
24/01/2012	WO	08:45	14:30	5.45	DH	1-2	SW	0	7
26/01/2012	WO	08:30	11:45	3.15	DH	3	S	Light drizzle	8
26/01/2012	6	12:40	15:40	3	DH	2	S	Light rain	8
27/01/2012	WO	08:45	16:00	6.15	DH	1-2	W	Drizzly	8
30/01/2012	WO	08:20	11:30	3.10	DH	5	SE	Wintry showers	7

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
30/01/2012	4	12:10	15:10	3	DH	6	SE	Wintry showers	8
31/01/2012	7	08:25	11:25	3	DH	5-6	S	0	8
02/02/2012	13	08:15	11:15	3	DH	3-4	SW	Very light drizzle	8
02/02/2012	2	12:00	15:00	3	DH	3	SSW	Very wet	8
03/02/2012	1	08:30	11:30	3	DH	1-2	WSW	0	3
03/02/2012	5	12:10	15:10	3	DH	2	SW	0	2
06/02/2012	WO	08:15	09:35	1.20	DH	4	N	0	6
06/02/2012	12	09:35	12:35	3	DH	4	N	0	4
06/02/2012	6	13:15	16:15	3	DH	3	N	0	3
07/02/2012	10	09:00	12:00	3	DH	3	S	0	3
07/02/2012	9	12:45	15:45	3	DH	4	SSE	0	7
08/02/2012	7	08:25	11:25	3	DH	6	S	0	8
08/02/2012	4	12:10	15:10	3	DH	6	S	0	8
09/02/2012	3	08:45	11:45	3	DH	3	SSE	Light drizzle	8
10/02/2012	8	09:00	12:00	3	DH	5	S	0	8
10/02/2012	11	12:45	15:45	3	DH	5	S	Drizzly at times	8
13/02/2012	5	08:30	11:30	3	DH	6	NW	Squally showers	8
13/02/2012	13	12:40	15:40	3	DH	6-7	NW	0	8
14/02/2012	2	08:15	11:15	3	DH	5-6	NW	0	8
14/02/2012	1	12:00	15:00	3	DH	5-6	NW	Light rain	8
15/02/2012	9	09:00	12:00	3	DH	6-7	NW	Light rain at first	8
15/02/2012	12	12:40	15:40	3	DH	6	NW	0	8
16/02/2012	4	08:15	11:15	3	DH	5	WNW	0	6
16/02/2012	WO	11:20	12:05	0.45	DH	5	W	Shower	6
16/02/2012	3	12:40	15:40	3	DH	5	W	Showery	7

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
17/02/2012	6	08:25	11:25	3	DH	3	SW	Heavy showers at time	7
18/02/2012	8	10:00	12:00	2	DH	4	W	Showers	4
18/02/2012	7	12:45	15:45	3	DH	4	W	Occ. showers, light	4
20/02/2012	11	08:45	11:45	3	DH	6-7	SW	Heavy rain at time	8
20/02/2012	8	12:30	15:30	3	DH	6-7	W	Showers, occ. heavy	8
21/02/2012	WO	07:30	15:00	7.30	DH	3-5	S	Constant drizzle, occ. heavy	8
22/02/2012	WO	08:15	16:00	7.45	DH	3-4	SW	Persistent rain	8
23/02/2012	WO	08:30	16:00	7.30	DH	3-4	SW	Persistent rain	8
29/02/2012	WO	08:20	11:40	3.20	DH	5	SW	Drizzle	8
29/02/2012	10	12:20	15:20	3	DH	5-6	SSW	0	8
29/02/2012	WO	15:20	17:00	1.40	DH	5	SW	Drizzle	8
02/03/2012	4	08:40	11:40	3	DH	3	SSE	0	3
02/03/2012	WO	12:00	12:30	0.30	DH	4	SE	0	5
02/03/2012	5	13:35	16:35	3	DH	5	SE	0	5
05/03/2012	13	08:35	11:35	3	DH	3	SW-WNW	0	5
05/03/2012	WO	11:50	12:20	0.30	DH	3	WNW	0	5
05/03/2012	6	13:15	16:15	3	DH	3	NW	0	4
06/03/2012	1	07:30	10:30	3	DH	4	S	0	7
06/03/2012	2	11:15	14:15	3	DH	5	S	0	8
07/03/2012	11	06:45	09:45	3	DH	4-5	WSW	Light rain, stopped 7:00	8
07/03/2012	9	10:30	13:30	3	DH	5	WSW	0	3
07/03/2012	8	14:15	17:15	3	DH	5	WSW	Occ. showers	5
08/03/2012	3	08:35	11:35	3	DH	4	SW	Wintry showers	6
08/03/2012	7	12:40	15:40	3	DH	4-5	SW	Light rain	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
09/03/2012	12	09:00	12:00	3	DH	5	WNW	Showery	6
09/03/2012	10	12:45	15:45	3	DH	6	W	Occ. shower	7
12/03/2012	WO	09:00	15:00	6	DH	5	SW	0	4
13/03/2012	6	08:25	11:25	3	DH	3-4	WNW	Light rain	8
13/03/2012	4	13:30	16:30	3	DH	4	WSW	Light rain, then clear	8
13/03/2012	Mig2	17:15	19:15	2	DH	4	WSW	Occ. drizzle	8
14/03/2012	Mig2	05:15	07:15	2	DH	4	SW	0	8
14/03/2012	5	08:00	11:00	3	DH	4	SW	0	8
14/03/2012	13	13:05	16:05	3	DH	4	SSW	0	8
15/03/2012	2	07:40	10:40	3	DH	4-5	SSW	0	8
15/03/2012	1	13:30	16:30	3	DH	5	SSW	Occ. drizzle	8
15/03/2012	Mig1	17:10	19:10	2	DH	5	SSW	Light rain	8
16/03/2012	Mig1	05:20	07:20	2	DH	4	S	Light rain	8
16/03/2012	8	07:50	10:50	3	DH	4	S	Light rain	8
16/03/2012	11	11:55	14:55	3	DH	4	S	Light rain, occ. showery spells	8
17/03/2012	7	08:20	11:20	3	DH	4	SW	Light rain	8
20/03/2012	12	12:10	15:10	3	DH	6-7	SW	Drizzly	8
20/03/2012	3	16:00	19:00	3	DH	5-6	SW	0	7
21/03/2012	WO	08:30	12:30		DH	5	SW	Drizzly	8
21/03/2012	Mig1	17:20	19:20	2	DH	5	SW	Drizzly	8
22/03/2012	Mig2	05:00	07:00	2	DH	4	SW	0	7
22/03/2012	10	08:00	11:00	3	DH	4	SW	0	7
22/03/2012	WO	11:20	12:50	1.30	DH	4	SW	0	8
22/03/2012	9	13:05	16:05	3	DH	4	SW	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
22/03/2012	Mig2	17:20	19:20	2	DH	1	SW	0	7
23/03/2012	Mig2	05:00	07:00	2	DH	3	SE	0	5
23/03/2012	WO	07:20	10:20	3	DH	3	SE	0	6
26/03/2012	WO	08:10	15:10	7	DH	3	SW	0	4
26/03/2012	Mig1	18:30	20:30	2	DH	1-2	W	0	6
27/03/2012	Mig2	05:45	07:45	2	DH	2	W	0	7
27/03/2012	Mig2	18:35	20:35	2	DH	3	SW	0	6
28/03/2012	Mig1	05:40	07:40	2	DH	5	WNW	Light rain occ.	8
29/03/2012	WO	08:10	15:00	6.50	DH	2-3	SW	0	3
02/04/2012	2	05:00	07:00	2	DH	2	NW	0	5
02/04/2012	4	07:45	10:45	3	DH	2	NW	0	6
03/04/2012	6	11:00	14:00	3	DH	4	NE	0	4
03/04/2012	13	15:00	18:00	3	DH	4	NE	Occ. wintry showers	6
03/04/2012	Mig1	18:55	20:55	2	DH	3	NE	Very light sleet	8
04/04/2012	Mig2	05:25	07:25	2	DH	2	NW	0	6
04/04/2012	5	10:50	13:50	3	DH	3	W	0	6
04/04/2012	7	14:45	17:45	3	DH	3-4	WSW	Light rain	8
04/04/2012	Mig2	18:55	20:55	2	DH	3-4	W	Light rain	7
05/04/2012	Mig1	05:15	07:15	2	DH	3-4	WNW	Occ. light rain	8
05/04/2012	1	08:30	11:30	3	DH	3	W	Occ. light drizzle	8
06/04/2012	2	10:45	13:45	3	DH	3-4	NW	Drizzly, occ. heavy	8
06/04/2012	3	15:00	18:00	3	DH	3	NW	0	5
10/04/2012	11	12:20	15:20	3	DH	5	NE	0	7
10/04/2012	8	16:15	19:15	3	DH	4-5	NNE	Occ. showers	7
10/04/2012	Mig1	19:45	21:45	2	DH	3-4	N	Showers occ. heavy	6

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
11/04/2012	Mig1	05:00	07:00	2	DH	3-4	N	Showers occ. heavy	8
11/04/2012	9	07:45	10:45	3	DH	5-6	NNW	Showers occ. very heavy	8
11/04/2012	WO	10:40	12:00	1.20	DH	5	NNW	0	8
11/04/2012	12	12:15	15:15	3	DH	5-6	NNW	Patchy light rain	8
11/04/2012	Mig2	19:15	21:15	2	DH	4-5	N	Occ. drizzle	8
12/04/2012	Mig2	04:55	06:55	2	DH	5-6	N	0	5
12/04/2012	WO	07:10	09:10	2	DH	5	N	Occ. hail, rain	7
12/04/2012	WO	09:45	10:45	1	DH	5	N	0	7
12/04/2012	10	12:40	15:40	3	DH	6	NNE	Occ. light rain	6
13/04/2012	WO	09:45	11:00	1.15	DH	5	N	Occ. hail	8
13/04/2012	4	12:30	15:30	3	DH	5-6	NE	Hail/sleet showers	8
14/04/2012	Mig1	04:40	06:40	2	DH	2-3	SE	0	7
16/04/2012	13	09:35	12:35	3	DH	1-2	N	Snow showers	8
16/04/2012	5	15:20	18:20	3	DH	1-2	S	Light sleet	7
16/04/2012	Mig1	19:30	21:30	2	DH	2-3	SE	0	5
17/04/2012	7	06:45	09:45	3	DH	4	SE	0	6
17/04/2012	WO	10:00	10:50	0.50	DH	4	SE	0	6
17/04/2012	1	14:00	17:00	3	DH	5-6	E	0	8
18/04/2012	6	14:35	17:35	3	DH	5	ESE	Light rain	8
18/04/2012	Mig2	19:35	21:35	2	DH	3	SE	0	5
19/04/2012	Mig2	04:40	06:40	2	DH	4-5	SE	0	7
19/04/2012	8	11:30	14:30	3	DH	3-4	SE	0	7
20/04/2012	WO	08:15	10:45	2.30	DH	3-4	SE	Persistent rain	8
23/04/2012	WO	08:00	11:50	3.50	DH	5	NE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
23/04/2012	9	12:55	15:55	3	DH	5-6	NE	0	8
24/04/2012	WO	07:15	10:00	2.45	DH	4-5	ENE	0	8
24/04/2012	3	10:50	13:50	3	DH	5-6	ENE	Very wet	8
26/04/2012	11	09:50	12:50	3	DH	6	NE	Sunny spells	8
26/04/2012	12	16:00	19:00	3	DH	6-7	NE	0	6
26/04/2012	Mig1	19:55	21:55	2	DH	3-4	NE	0	6
27/04/2012	Mig1	04:15	06:15	2	DH	4-5	N	Occ. light showers	5
27/04/2012	WO	06:30	08:50	2.20	DH	4	N	0	5
27/04/2012	2	14:00	17:00	3	DH	6	NW	Hail, snow, rain	6
28/04/2012	WO	08:45	11:15	2.30	DH	3	N	0	4
30/04/2012	WO	08:35	11:25	2.50	DH	3	N	0	8
30/04/2012	10	11:30	14:30	3	DH	3-4	NE	0	8
01/05/2012	7	12:15	15:15	3	DH	2	SW	0	7
01/05/2012	4	16:30	19:30	3	DH	2-3	NW	0	7
01/05/2012	Mig2	20:15	22:15	2	DH	1-2	WNW	0	1
02/05/2012	Mig2	03:50	05:50	2	DH	2 -slight 3	WNW	0	8
02/05/2012	5	06:35	09:35	3	DH	2-3	WNW	0	n/a
02/05/2012	1	10:40	13:40	3	DH	2-3	WNW	0	8
03/05/2012	9	11:00	14:00	3	DH	3	W	Light to heavy	8
03/05/2012	3	17:00	20:00	3	DH	3	N	0	6
03/05/2012	Mig2	20:15	22:15	2	DH	3	N	Occ. wintry showers	8
04/05/2012	Mig1	03:45	05:45	2	DH	5	N	Wintry showers	8
04/05/2012	6	06:30	09:30	3	DH	5	N	Wintry showers	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
04/05/2012	12	10:30	13:30	3	DH	5-6	N	Frequent prolonged heavy showers	6
05/05/2012	10	07:45	10:45	3	DH	5	NW	0	8
05/05/2012	11	14:50	17:50	3	DH	5-6	NNW	Wintry showers	5
07/05/2012	2	08:30	11:30	3	DH	3	WSW	Occ. light rain	4
07/05/2012	13	13:05	16:05	3	DH	3	SSW	Showers	7
08/05/2012	8	09:00	12:00	3	DH	5	NE	Showers, sometimes heavy	8
08/05/2012	5	13:00	16:00	3	DH	6	E	Persistent often heavy from 14:30	8
09/05/2012	4	04:30	07:30	3	DH	5-6	NNW	Persistent drizzle	8
09/05/2012	1	12:30	15:30	3	DH	6	NW	Persistent rain until 13:15 then dry & bright	8->6
10/05/2012	3	08:35	11:35	3	DH	2	NE	0	5
10/05/2012	10	14:30	17:30	3	DH	4	N	0	8
10/05/2012	9	18:45	21:45	3	DH	4	N	Occ. light showers, heavier after 20:00	7
11/05/2012	7	03:50	05:50	3	DH	4	N	Light showers, mainly dry	8
11/05/2012	11	07:15	10:15	3	DH	5	N	Occ. hail showers	8
11/05/2012	12	13:30	16:30	3	DH	6	N	0	6
14/05/2012	Mig1	03:30	05:30	2	DH	6-7	W	Frequent heavy showers	8
14/05/2012	13	06:30	09:30	3	DH	6-7	W	Showers, frequent, often heavy	7
14/05/2012	6	17:15	20:15	3	DH	5-6	WNW	Light showers	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
14/05/2012	Mig1	20:45	22:45	2	DH	5-6	NW	Dry first, heavy showers at 21:35	8
15/05/2012	Mig2	03:25	05:25	2	DH	5-6	WNW	Fairly frequent showers	8
15/05/2012	2	06:15	09:15	3	DH	5 occ. 6	W	Light showers	8
18/05/2012	WO	08:00	12:00	4	DH	4	NW	Rain before 0800	8
18/05/2012	4	12:30	15:30	3	DH	4	NW	0	4
20/05/2012	9	15:45	18:45	3	DH	3-4	E	0	4
20/05/2012	8	19:30	22:30	3	DH	3-4	E	0	7
21/05/2012	WO	05:10	12:00	6.50	DH	2-3	SE	0	2
21/05/2012	6	13:05	16:05	3	DH	3	SE	0	1
22/05/2012	WO	07:15	12:00	4.45	DH	1	SE	0	1
22/05/2012	5	17:30	20:30	3	DH	3	SE	0	1
22/05/2012	Mig2	21:15	23:15	2	DH	2-3	SE	0	2
23/05/2012	Mig1	03:00	05:00	2	DH	2	ESE	0	2
23/05/2012	1	05:45	08:45	3	DH	2	ESE	0	6
23/05/2012	WO	08:30	12:00	3.30	DH	2	ESE	0	5
24/05/2012	7	15:30	18:30	3	DH	2-3	NE	0	8
24/05/2012	13	19:25	22:25	3	DH	2-3	NE	0	8
25/05/2012	11	10:40	13:40	3	DH	1-2	NE	0	6
25/05/2012	8	14:30	17:30	3	DH	2	NE	0	1
25/05/2012	Mig1	21:00	23:00	2	DH	2	ENE	0	8
26/05/2012	WO	07:45	12:00	4.15	DH	3-4	N	One light shower	5
29/05/2012	10	07:45	10:45	3	DH	2	N	0	8
29/05/2012	WO	10:50	12:00	1.10	DH	2	N	0	8
29/05/2012	12	12:30	15:30	3	DH	2	N	0	5

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
31/05/2012	WO	07:40	11:15	3.35	DH	2-3	NE	0	6
31/05/2012	3	11:30	14:30	3	DH	2-3	ENE	Occ. very light spots	8
31/05/2012	2	15:15	18:15	3	DH	2 occ.3	NE	0	7
08/06/2012	4	12:00	15:00	3	DH	5	ENE	0	8
09/06/2012	7	11:15	14:15	3	DH	4-5	NE	0	8
11/06/2012	6	08:15	11:15	3	DH	3-4	NE	Occ. light rain	8
11/06/2012	2	11:55	14:55	3	DH	3-4	NNE	Light showers	8
12/06/2012	5	09:00	12:00	3	PC	4	N	0	7
12/06/2012	4	12:45	15:45	3	PC	4-5	N	0	6
13/06/2012	9	08:30	11:30	3	DH	5	N	Occ. light rain	7
13/06/2012	10	12:25	15:25	3	DH	5	N	0	5
14/06/2012	12	09:25	12:25	3	DH	4	N	0	6
14/06/2012	7	13:10	16:10	3	PC	5	N	0	8
15/06/2012	6	08:15	11:15	3	PC	2	E	0	3
16/06/2012	8	10:00	13:00	3	DH	4	NNE	0	7
16/06/2012	11	13:50	16:50	3	DH	4-5	NNE	0	7
18/06/2012	13	08:40	11:40	3	DH	3	W	0	4
27/06/2012	WO	07:30	09:30	2	RJC	4-5	E	0	3
27/06/2012	1	09:30	12:30	3	RJC	4-5	E	0	3
27/06/2012	3	13:45	16:45	3	RJC	4-5	E	0	4
28/06/2012	WO	08:00	08:55	0.55	RJC	6	E	0	8
28/06/2012	13	09:00	12:00	3	RJC	6	E	0	8
28/06/2012	5	12:55	15:55	3	RJC	6	E	0	8
30/06/2012	1	11:00	14:00	3	RJC	4	SW	0	8
01/07/2012	WO	08:25	09:25	1	RJC	4	SW	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
01/07/2012	13	09:30	12:30	3	RJC	4	SW	0	8
02/07/2012	WO	08:30	09:25	0.55	RJC	4	NW	Occ. light drizzle	8
02/07/2012	5	09:30	12:30	3	RJC	4	NW	Occ. light drizzle	8
02/07/2012	6	14:00	17:00	3	RJC	4	NW	0, occ. drizzle	8
03/07/2012	7	09:00	12:00	3	RJC	4	SW	0	8
05/07/2012	4	12:00	15:00	3	RJC	2	SE	0	8
05/07/2012	13	15:45	18:45	3	RJC	2	SE	0	8
06/07/2012	1	07:00	10:00	3	RJC	3	NE	0	8
06/07/2012	3	10:45	13:45	3	RJC	3	NE	0	8
06/07/2012	2	14:45	17:45	3	RJC	3-4	NE	0	8
07/07/2012	WO	08:25	09:25	1	RJC	7	NE	0	8
07/07/2012	6	09:30	12:30	3	RJC	7	NE	0	8
09/07/2012	WO	07:15	08:20	1.05	RJC	6	NE	0	8
09/07/2012	12	08:30	11:30	3	RJC	6	NE	0	8
09/07/2012	7	12:45	15:45	3	RJC	6	NE	0	8
10/07/2012	WO	06:40	08:40	2	RJC	3	N	0	8
10/07/2012	9	08:45	11:45	3	RJC	3	N	0	8
10/07/2012	10	12:45	15:45	3	RJC	3	N	0	8
11/07/2012	WO	07:50	08:55	1.05	RJC	4	N	0	8
11/07/2012	8	09:00	12:00	3	RJC	4	N	0	8
11/07/2012	11	13:00	16:00	3	RJC	4	N	0	8
12/07/2012	WO	08:20	09:20	1	RJC	4	N	0	8
12/07/2012	6	09:30	12:30	3	RJC	4	N	0	8
12/07/2012	4	13:30	16:30	3	RJC	4	N	0	7
13/07/2012	7	09:15	12:15	3	RJC	4	N	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
13/07/2012	13	13:00	16:00	3	RJC	4	N	0	8
14/07/2012	4	11:00	14:00	3	RJC	4	N	0	7
16/07/2012	5	04:50	07:50	3	RMM	3	WSW	Showers	8
16/07/2012	WO	07:30	08:30	1	RJC	4	W	0 - drizzle	8
16/07/2012	3	08:35	11:35	3	RJC	4	W	0 - drizzle	8
16/07/2012	1	12:25	15:25	3	RJC	4	W	0	8
17/07/2012	WO	07:30	08:40	1.10	RJC	4	W	0-drizzle	8
17/07/2012	Diver	08:05	11:05	3	RMM	2	WNW	occ. light showers	8
17/07/2012	12	08:45	11:45	3	RJC	4	W	0-drizzle	8
17/07/2012	Diver	11:35	14:35	3	RMM	2-3	NW	Light drizzle	8
17/07/2012	13	13:30	16:30	3	RJC	4	W	0	7
18/07/2012	2	09:30	12:30	3	RJC	4	NE	0	6
18/07/2012	3	13:20	16:20	3	RJC	4	NE	0	5
19/07/2012	Diver	07:05	10:05	3	RMM	3/4	N	0	8
19/07/2012	8	08:15	11:15	3	RJC	4	N	0	7
19/07/2012	Diver	10:30	14:30	4	RMM	4	N	Occ. light showers	8
19/07/2012	11	12:10	15:10	3	RJC	4	N	0	8
20/07/2012	WO	06:00	09:05	3.05	RJC	4	NW	0	8
20/07/2012	Diver	07:00	11:00	4	RMM	1-2	NNW	Occ. light showers	8
20/07/2012	Diver	08:30	14:00	5.5	PC	3-4	W	0	
20/07/2012	10	09:00	12:00	3	RJC	4	NW	0	8
20/07/2012	Diver	11:15	14:15	3	RMM	1-2	NNW	Occ. light rain	6
20/07/2012	9	12:55	15:55	3	RJC	4	NW	0	6
23/07/2012	6	08:30	11:30	3	RJC	7	SW	Occ. showers	8
23/07/2012	7	12:20	15:20	3	RJC	9	SW	Occ. showers	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
24/07/2012	5	08:00	11:00	3	RJC	6	SW	0	4
24/07/2012	2	11:45	14:45	3	RJC	6	SW	0	4
24/07/2012	1	15:30	18:30	3	RJC	6	SW	0	2
25/07/2012	WO	05:00	06:55	1.55	RJC	5	SW	0	8
25/07/2012	11	07:00	10:00	3	RJC	5	SW	0	8
25/07/2012	10	10:45	13:45	3	RJC	5	SW	Occ. drizzle	8
25/07/2012	9	14:45	17:45	3	RJC	5	SW	0	8
26/07/2012	WO	06:00	06:55	0.55	RJC	2	SW	0	8
26/07/2012	8	07:00	10:00	3	RJC	2	SW	0	8
26/07/2012	9	10:50	13:50	3	RJC	2	S	0	8
26/07/2012	10	14:35	17:35	3	RJC	3	S	0	8
27/07/2012	WO	09:30	11:30	2	DH	4	N	0	5
27/07/2012	Diver	12:00	20:15	8.25	RJC	3	S	0	3
28/07/2012	Diver	08:00	12:30	4.5	RJC	3	SE	0	6
29/07/2012	4	12:00	15:00	3	RJC	3	SE	Occ. showers	6
30/07/2012	5	09:30	12:30	3	RJC	3	E	0	3
31/07/2012	Diver	07:00	10:00	3	RJC	2	SW	0	2
31/07/2012	Diver	16:00	17:00	1	RJC	3	NW	0	5
03/08/2012	7	08:30	11:30	3	RJC	3	NE	0	8
03/08/2012	4	12:30	15:30	3	RJC	3	NE	0	8
04/08/2012	6	08:30	11:30	3	RJC	2	NE	0	8
04/08/2012	5	12:30	15:30	3	RJC	2	NE	0	8
05/08/2012	13	09:30	12:30	3	RJC	2	E	0	8
06/08/2012	1	07:00	10:00	3	RJC	3	NE	0	8
06/08/2012	3	10:45	13:45	3	RJC	3	NE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
06/08/2012	2	14:45	17:45	3	RJC	3	NE	0	8
07/08/2012	11	07:00	10:00	3	RJC	3	NW	0	8
07/08/2012	10	10:45	13:45	3	RJC	3	NW	0	8
07/08/2012	9	14:30	17:30	3	RJC	4	NW	0	8
08/08/2012	12	08:30	11:30	3	RJC	3	NW	0	8
08/08/2012	5	16:00	19:00	3	RJC	3	NW	0	8
09/08/2012	2	07:00	10:00	3	RJC	4	W	Occ. showers	8
09/08/2012	1	10:45	13:45	3	RJC	4	W	Occ. showers	8
09/08/2012	3	14:30	17:30	3	RJC	4	W	0	8
10/08/2012	8	07:00	10:00	3	RJC	4	W	Occ. light shower	8
10/08/2012	10	10:50	13:50	3	RJC	4	W	0	8
10/08/2012	9	14:45	17:45	3	RJC	4	W	0	8
11/08/2012	6	09:00	12:00	3	RJC	1	S	Occ. drizzle	8
11/08/2012	7	13:00	16:00	3	RJC	1	S	0	8
12/08/2012	4	10:30	13:30	3	RJC	3	SE	0	8
13/08/2012	12	08:30	11:30	3	RJC	6	SE	0	3
13/08/2012	13	13:30	16:30	3	RJC	5	SE	0	2
14/08/2012	1	08:00	11:00	3	RJC	5	SE	0	8
14/08/2012	2	12:00	15:00	3	RJC	5	SE	0	8
15/08/2012	4	11:30	14:30	3	RJC	5	SE	0	8
16/08/2012	7	11:30	14:30	3	RJC	5	SE	Occ. light drizzle	8
16/08/2012	3	12:55	15:55	3	CJB	5	E	Light rain	8
17/08/2012	8	11:15	14:15	3	RJC	5	SE	0	8
19/08/2012	5	12:30	15:30	3	RJC	2	SE	0	6
20/08/2012	11	09:00	12:00	3	RJC	3	SE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
20/08/2012	9	12:45	15:45	3	RJC	3	SE	Occ. showers	8
22/08/2012	13	14:00	17:00	3	RJC	2	SE	Persistent, heavy	8
23/08/2012	6	14:30	17:30	3	RJC	2	W	0	8
24/08/2012	12	09:00	12:00	3	RJC	2	S	Occ. light showers	8
24/08/2012	12	12:45	15:45	3	RJC	3	S	Occ. light showers	8
25/08/2012	8	09:30	12:30	3	RJC	3	NE	0	8
26/08/2012	2	09:30	12:30	3	RJC	4	NE	0	6
27/08/2012	10	10:00	13:00	3	RJC	6	SE	0	8
28/08/2012	1	09:00	12:00	3	RJC	3	SW	0	3
28/08/2012	3	12:45	15:45	3	RJC	4	SW	0	7
29/08/2012	11	09:15	12:15	3	RJC	2	S	Occ. showers	8
15/09/2012	7	13:30	16:30	3	RJC	6-7	SW	Drizzle	8
16/09/2012	6	11:40	14:45	3	RJC	5-6	SW	Showers	3
17/09/2012	12	08:30	11:30	3	RJC	5	SW	Showers	6
17/09/2012	12	12:15	15:15	3	RJC	4	SW	Showers	8
18/09/2012	2	08:30	11:30	3	RJC	5	NW	0	4
18/09/2012	3	12:15	15:15	3	RJC	5-6	NW	0	5-6
19/09/2012	13	08:30	11:30	3	RJC	5-6	WNW	Frequent heavy showers	7
20/09/2012	4	08:25	11:25	3	RJC	5	W	Showers	5
20/09/2012	5	12:45	15:45	3	RJC	5	S	Showers	6
21/09/2012	12	14:15	17:15	3	CB	0-1	variable	Rain showers	8
22/09/2012	10	10:35	13:35	3	CB	2	NW	0	4-8
22/09/2012	9	14:50	17:50	3	CB	1	NW	0	8
23/09/2012	8	09:00	12:00	3	CB	2	SE	0	8
23/09/2012	11	13:00	16:00	3	CB	2	SE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
24/09/2012	1	08:35	11:35	3	RJC	4	E	Brief light rain	4
24/09/2012	9	08:30	11:30	3	CB	3	SE-E	0	2
24/09/2012	10	12:15	15:15	3	CB	3-4	E	0	8
25/09/2012	11	08:10	11:10	3	CB	4	NE	0	8
25/09/2012	3	08:15	11:15	3	RJC	5	NE	0	7
25/09/2012	8	11:50	14:50	3	CB	4-3	NE	0	8
26/09/2012	2	08:45	11:45	3	RJC	4	NNW	0	8
27/09/2012	8	10:00	13:00	3	CB	2-3	W	0	5
27/09/2012	11	14:00	17:00	3	CB	2-3	W	0	6
28/09/2012	5	08:00	11:00	3	CB	2-4	SW	Showers	3
28/09/2012	4	11:50	14:50	3	CB	3-5	SW	Hail & rain showers	8
05/05/2015	WO	10:30	16:30	6	RP	6	E	0	8
06/05/2015	WO	11:00	16:30	5.5	RP	6	SW	Drizzle/mist	8
08/05/2015	WO	09:00	16:30	7.5	RP	7	SW	0	4
09/05/2015	WO	09:45	16:30	6.45	RP	4	SW	Light showers	6
24/06/2015	WO	08:30	15:30	7	CT	3	NW	0	7
25/06/2015	WO	08:15	15:30	7.15	CT	3	NW	0	6
13/07/2015	Diver	12:00	22:00	10	CC	3	SE	0	6
14/07/2015	Diver	12:30	21:30	9	PC	3	SE	0	5
14/07/2015	WO	06:00	11:30	5.5	PC	3	SE	0	5
16/07/2015	WO	07.00	15:00	8	PC	4	ESE	0	5
19/07/2015	Diver	08:00	19:00	11	PC	4	SE	0	8
20/07/2015	Diver	08:30	18:30	10	CC	1	SE	0	8
20/07/2015	Diver	03:30	12:00	8.30	PC	2	SE	0	8
22/07/2015	Diver	10.45	18.15	7.30	PC	3-4	SE	0	8

Date	Survey/ VP no'	Start time	End time	Hours	Observer	Wind speed (m/s)	Wind direction	Precipitation	Cloud cover (Oktas)
24/07/2015	Diver	05:30	11:30	6	PC	3	NNW	0	6
24/07/2015	WO	12:00	15:00	3	PC	3	NNW	0	6
18/08/2015	Diver	09:00	17:45	7.45	EF	2	SE	N/A	5
19/08/2015	Diver	08:30	17:00	7.30	EF	3	W	0	4
21/08/2015	Diver	07:00	18:00	9	EF	2	SW	0	5
21/08/2015	WO	07:30	15:00	7.30	DS	3	SW	0	5

Key:

Surveyors: CB=Claire Bailly, CJB=Chris Bingham, MC=Mark Chapman, CC=Cameron Cosgrove, PC=Peter Cosgrove, RJC=Robert Curtis, KC=Kevin Cuthbert, MD=Martha Devine, EF=Euan Ferguson, DH=David Hunt, KL=Katie Lloyd, RMM=Ross Macgregor, RP=Robert Potter, NGR=Neil Robertson, MS=Malcolm Smith, CT=Chris Townend, and RWP=Ryan Wilson-Parr.

Survey type: Diver = diver watches, WO = walk-over, Mig1 = migration VP 1, Mig2 = migration VP 2.

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