Lamberhurst Parish methodology for measuring how Dark the skies are using a light meter (SQM)

This the process that the volunteers used to produce the darks skies map in the Neighbourhood development plan.

Before taking the readings, first make sure the sensor/faceplate has been wiped and is clean. You should leave the light meter (SQM) outside for at least five minutes before taking any measurements so it adjusts to the outdoor air temperature.

After you've done this, point the SQM so that sensor/faceplate points toward the sky directly above you (know as the zenith). Press the red button once and release.

Under urban skies, a reading will be displayed almost immediately. Under the very darkest conditions (no moon in the sky, far from building lights) the SQM may take up to a minute to complete its measurement. Please do not move the SQM until the reading is displayed. Take a total of ten readings approximately three minutes apart. Ensure each reading is taken from exactly the same location and the Sky Quality Meter is always pointed directly upwards. Please note down each of your ten readings produced by the Sky Quality Meter and then calculate an average by adding them all up and dividing the total by ten.

What other information should you collate?

Also, be sure to record the date and time at which you make your recordings, as well as the location (either in the form of a postcode, but preferably in the form of latitude and longitude coordinates). The simplest way to find the latitude and longitude coordinates of your recording location is by using Google Maps but there are other alternatives such as :

- https://gridreferencefinder.com
- Download Grid Ref Compass mobile app
- Use compass function on your phone . Make sure you record information in degrees and minutes which can then be converted into coordinates.
- OS Map and mark location of light meter readings.

What do you also have to consider?

Although you should only record if the sky is clear and free from interfering cloud cover, it would be helpful if you could estimate the level of any cloud cover that is present using clear skies, quarter of the sky, half of the sky and more than half of the sky. You also need to consider the phases of the moon and there is app to let you know when they occur for example The Moon: Calendar Moon Phases app. If there is full moon it can affect the results by a1-2 points.

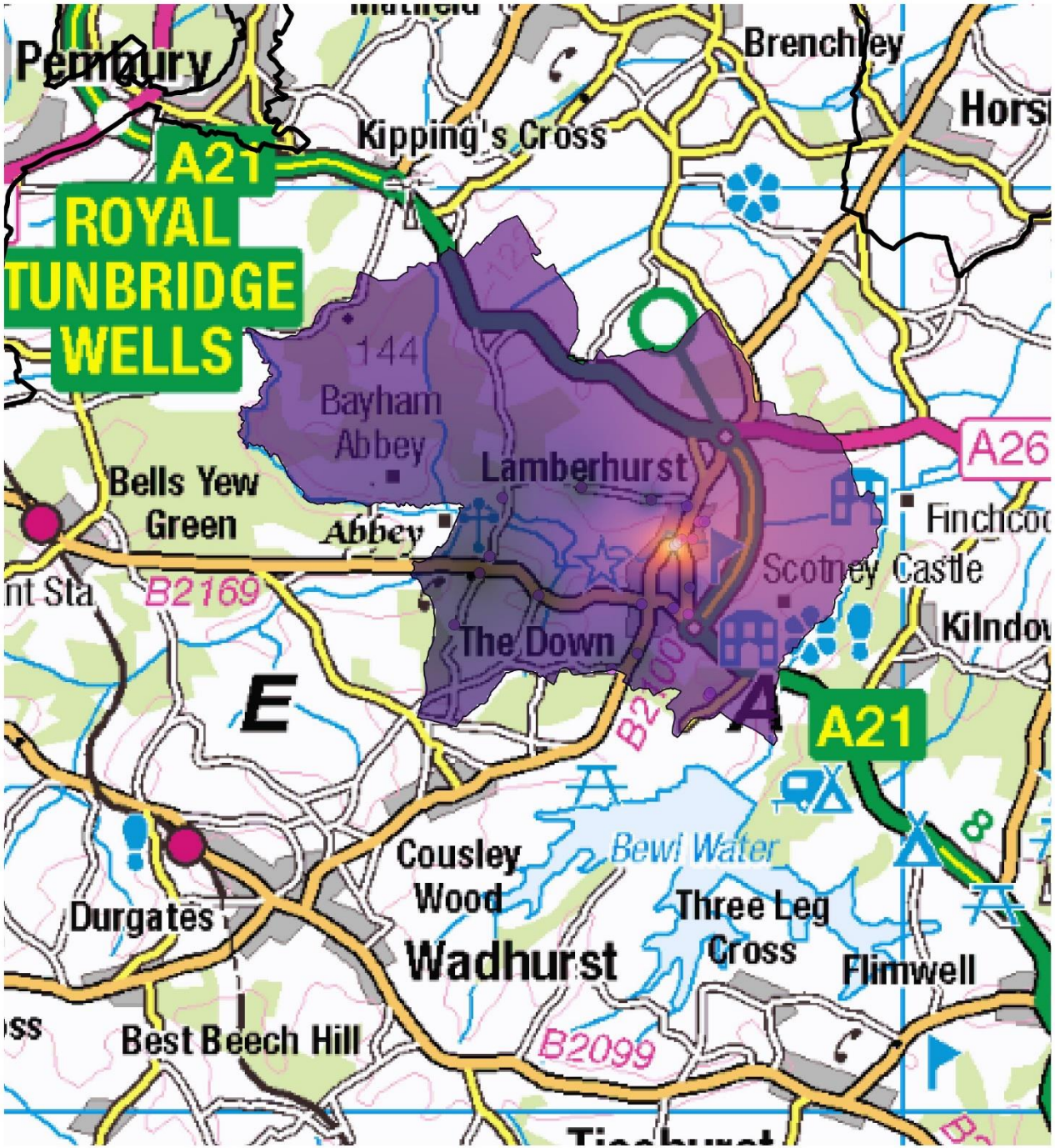
What do the results mean?

The higher the number produced by the Sky Quality Meter, the darker the sky. A reading of 22 or above is highly unlikely in this part of the country, and would only be recorded in an uninhabited area almost totally free of light pollution. In contrast, a reading between 18 and 19 is what you would expect in a city or other heavily light polluted urban area. Measurements between 19 and 22 are much more likely in the High Weald, with anything approaching 22 being a very dark rural sky in which the details of the Milky Way are clearly visible.

Light Meter Readings for Lamberhurst Parish

ID	Date	Time	Name	Latitude (Decimal)	Longitude (Decimal)	X Coordinate	Y Coordinate	Meter Reading	Cloud Coverage	Contact Details
32	12/02/2018	19:05	Samantha Nicholas	51.09325	0.393124	567679	135384	18.59	Clear	High Weald AONB Unit
33	12/02/2018	19:07	Samantha Nicholas	51.09392	0.390861	567518	135452	20.19	Clear	High Weald AONB Unit
34	12/02/2018	19:10	Samantha Nicholas	51.0944	0.385974	567174	135495	19.84	Clear	High Weald AONB Unit
35	12/02/2018	19:12	Samantha Nicholas	51.0944	0.385974	567174	135495	20.64	Clear	High Weald AONB Unit
36	12/02/2018	19:17	Samantha Nicholas	51.09556	0.370098	566058	135589	20.88	Clear	High Weald AONB Unit
37	12/02/2018	19:22	Samantha Nicholas	51.09298	0.356927	565145	135271	20.62	Clear	High Weald AONB Unit
38	12/02/2018	19:25	Samantha Nicholas	51.09794	0.361072	565418	135832	21.33	Clear	High Weald AONB Unit
39	12/02/2018	19:27	Samantha Nicholas	51.09954	0.362693	565526	136014	20.67	Clear	High Weald AONB Unit
40	12/02/2018	19:29	Samantha Nicholas	51.10518	0.364953	565664	136646	20.56	Clear	High Weald AONB Unit

ID	Date	Time	Name	Latitude (Decimal)	Longitude (Decimal)	X Coordinate	Y Coordinate	Meter Reading	Cloud Coverage	Contact Details
41	12/02/2018	19:35	Samantha Nicholas	51.10595	0.377249	566522	136760	20.77	Clear	High Weald AONB Unit
42	12/02/2018	19:37	Samantha Nicholas	51.10452	0.38798	567278	136624	20.77	Clear	High Weald AONB Unit
43	12/02/2018	19:39	Samantha Nicholas	51.10377	0.393454	567664	136554	20.31	Clear	High Weald AONB Unit
44	12/02/2018	19:42	Samantha Nicholas	51.08962	0.385042	567126	134961	20.61	Clear	High Weald AONB Unit
45	12/02/2018	19:45	Samantha Nicholas	51.08819	0.38098	566847	134794	20.66	Clear	High Weald AONB Unit



Dark Skies

Lamberhurst Parish

The study area covered 8979ha across the Ashdown Forest, encompassing the villages of Nutley, Chelwood Gate, Forest Row and Coleman's Hatch.

The lightest reading of 11.8 (mags/arcsec2) was taken in the center of Forest Row, and the darkest at 21.37 (mags/arcsec2) in the country outside Nutley. Particularly dark areas were located across the Ashdown Forest heathland whilst, as expected, the lightest areas were found surrounding the urban areas.

Legend

- Study Site

Light Meter Readings (mags/arcsec2)

- 11.8
- 16.3
- 17.8
- 18.2
- 18.5
- 18.7
- 19.0
- 19.1
- 21.4

N

0 1 2 3 km

1:60,000

Researched and produced by the High Weald AONB Partnership

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