Explanation of two noise mitigation documents.

1. Noise mitigation implementation report

This report gives details of the turbines where the noise mitigation strategy has been implemented. You will see that there are two parts to the strategy – generator and curtailment.
Firstly, all generators have had the start up mode of operation changed from star/delta to delta only. This is a term that describes the generator configuration during start up and has the result of reducing noise at lower wind speeds.
Secondly, seven turbines have been configured to shut down when certain wind speed, direction and time of day conditions are met, as required by the noise mitigation strategy. These have been specified by our noise consultants and agreed by NDC.
Thirdly, mode changes have been incorporated into the software of applicable turbines per the noise mitigation strategy. These basically change the blade angle in certain wind speeds, directions and times of day.
Lastly, there is an explanation on how they will ensure that no software parameters are changed without an approved process. They have explained that an alarm will be generated if anything is changed.

2. Event spreadsheet

This sheet gives details of the shutdown events for each of the seven turbines mentioned on the noise mitigation strategy implementation report.
The time stamp is ten minutes for each event, so even if any of the three parameters (wind speed, direction, time of day) have gone outside of the threshold, they will still show a shutdown for that 10 minutes. To aid identification of this, and to show how the wind speed varies over a ten minute period, the wind speed average, max and min are shown. The wind speeds are shown in metres/second and direction is in degrees.
The figures for total shutdown time for the seven affected turbines from 21st January to 16th June 2015, are below:

Turbine	**Total shutdown time (hours)**
11	108
13	68
16	178
18	142
20	171
21	510
22	199