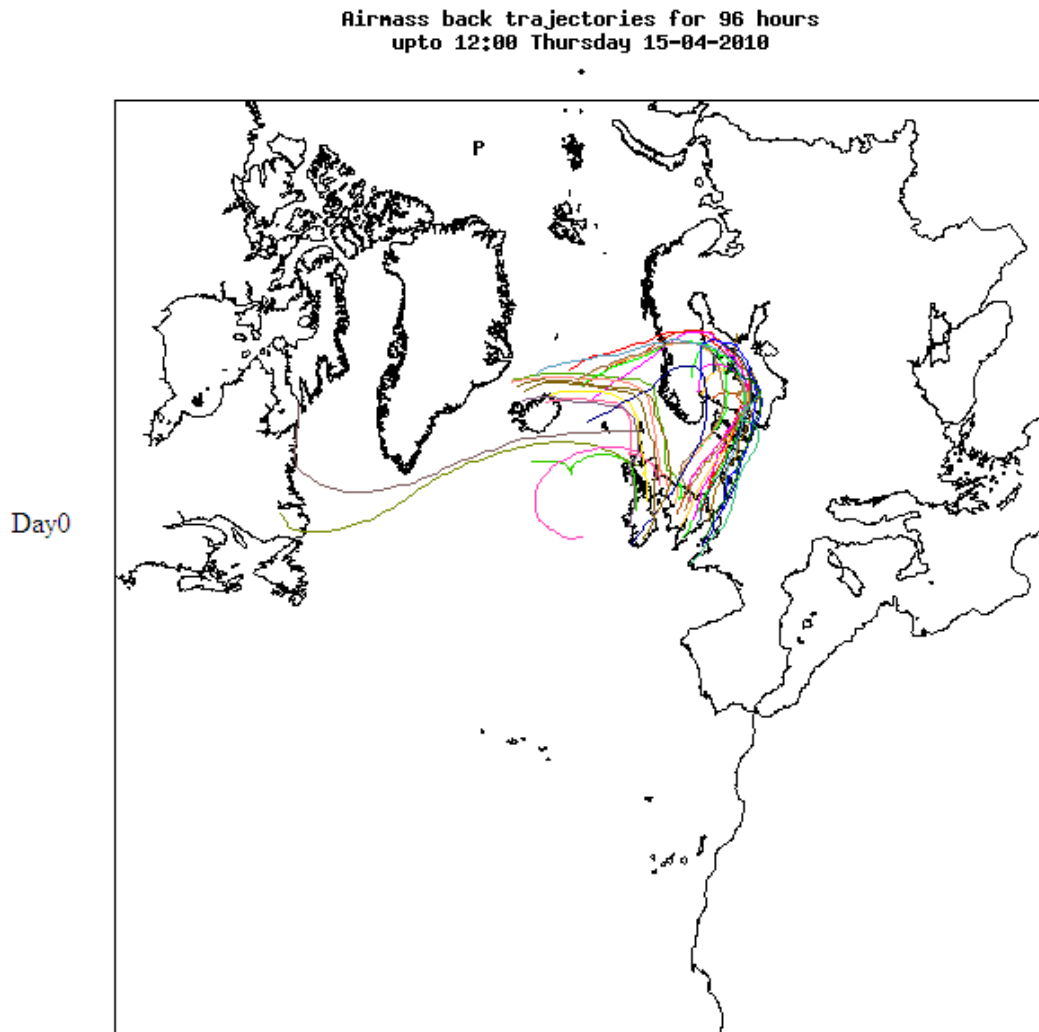


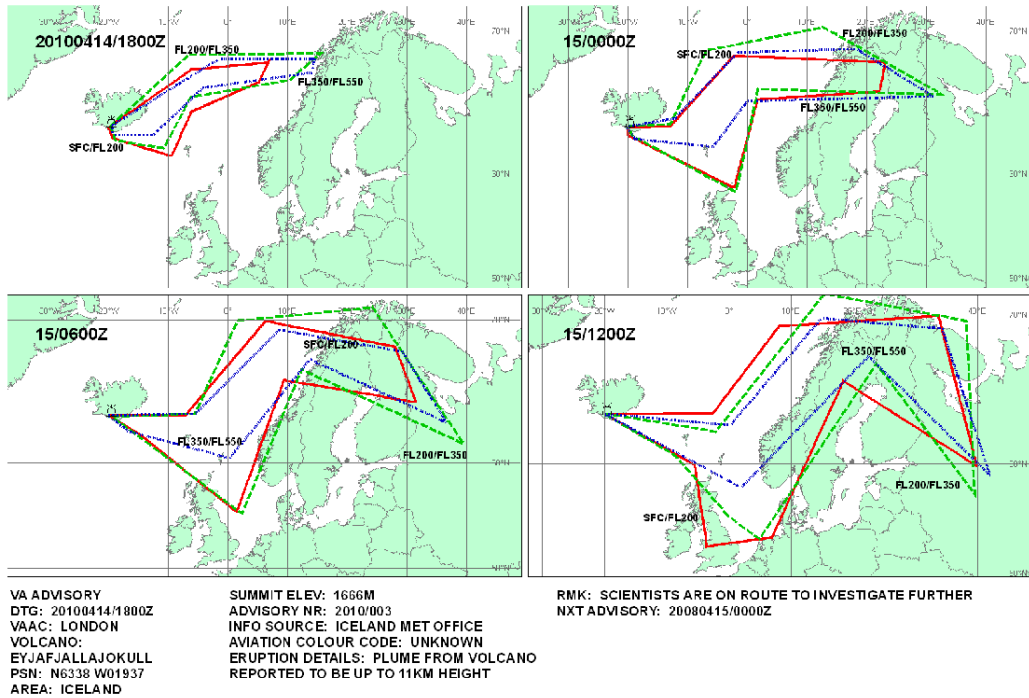
### **The Eyjafallajokull Volcanic Dust Cloud and UK Air Quality**

Currently there is a cloud of volcanic ash situated over the UK, caused by the eruption of the Eyjafallajokull volcano in Iceland. This cloud of volcanic ash has grounded most flights from UK airports, due to the dangers to aircraft engines from the fine abrasive dust. The figure below shows the current 96 hour back trajectory. It clearly indicates that air arriving over the UK has originated from Iceland.



**Figure 1. 96 hour Airmass back trajectories for Thursday 15<sup>th</sup> April 2010.**

The above air mass back trajectories agree closely with the graphics issued by the Volcanic Ash Advisory Centre, VAAC, (Figure 2) showing the plume's location.



**Figure 2. VAAC issued graphics of the Dust Cloud.**

Figure 2 shows that the ash cloud originated over Iceland and then travelled eastward towards Scandinavia, before heading South West towards the UK; this is in agreement to the back trajectories shown in Figure 1. Figure 3 shows a satellite image of the area of interest and the ash cloud.

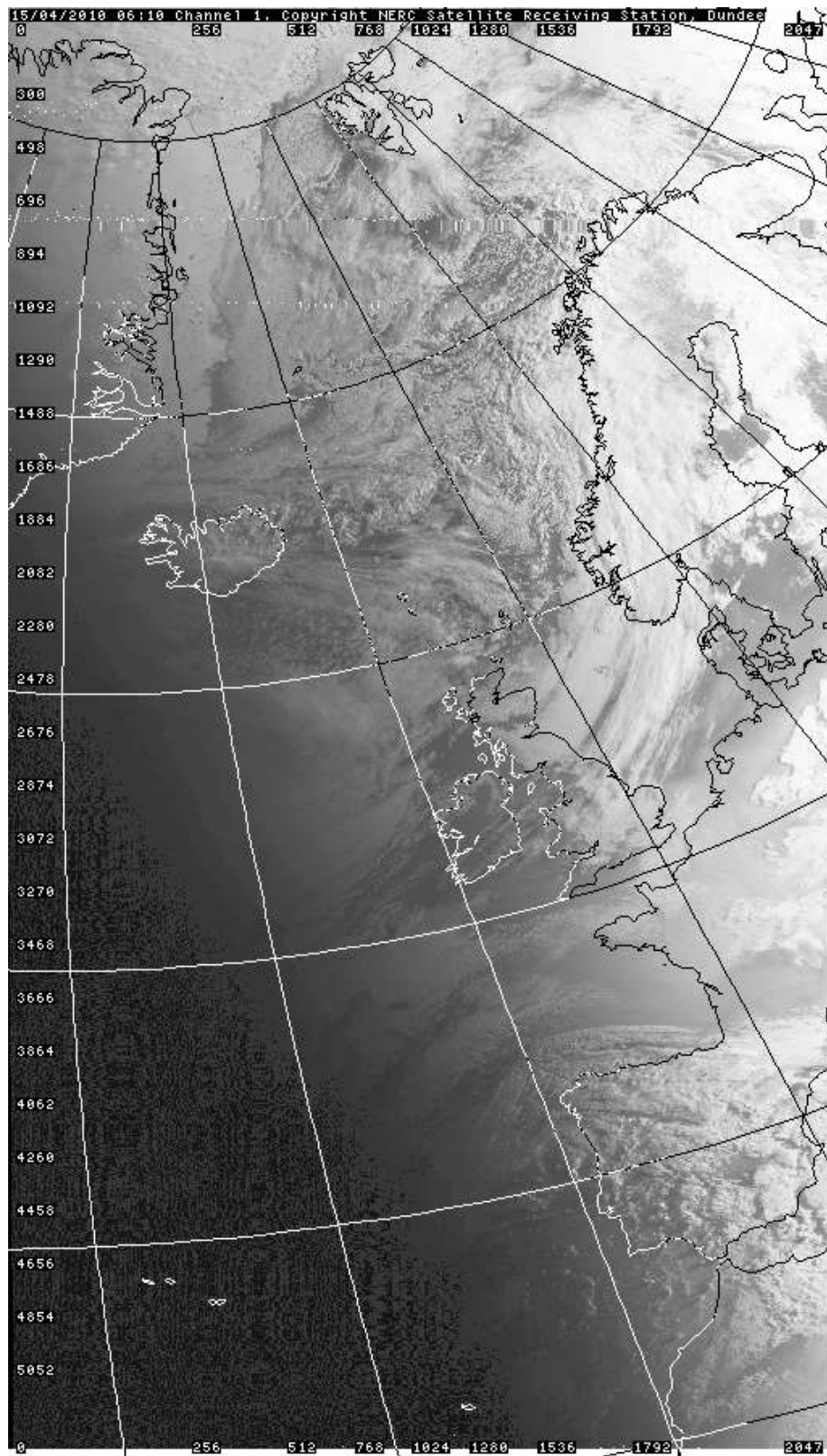
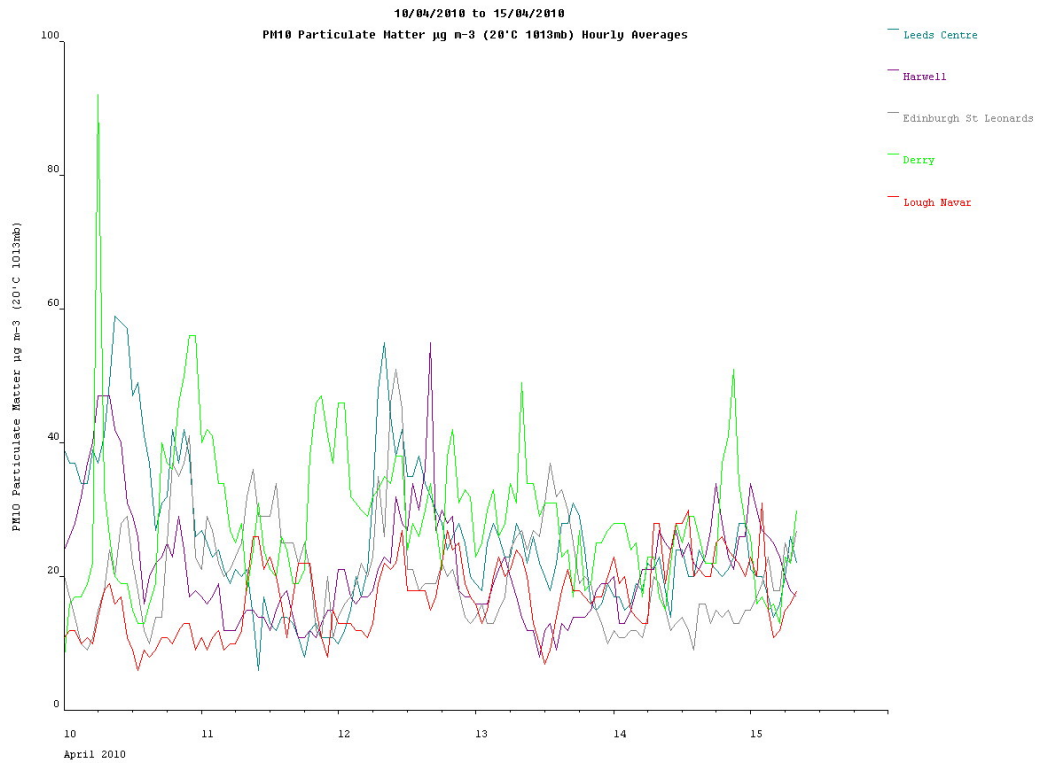


Figure 3. Satellite Image of the Ash Cloud.

Currently the cloud is estimated to be at an altitude of between 6 -11km; the likelihood of it grounding in the next 24 hours over the UK - and its effect on ground level air quality- is therefore expected to be minimal. Figure 4 shows typical current PM<sub>10</sub> concentrations as measured by AURN air monitoring stations.



**Figure 4. Graph showing current PM10 Concentrations at AURN sites**

As can be seen in Figure 4, there is at the present time no apparent significant rise in PM<sub>10</sub> levels due to the cloud. We will continue to monitor the situation closely and advise of any developments.

**AEA's air quality forecasting team**

**15/04/2010**