

Wildfires in northwest Scotland (version 2, updated 10 Sep 2014)

Fires large enough to be seen from space burned in the Highlands and Islands between 1st and 3rd April 2013. Figure 1 shows active fire hotspots detected by the MODIS sensor on the Aqua and Terra satellites. MODIS also records light which can detect burned areas after the fire (Figures 2 and 3).

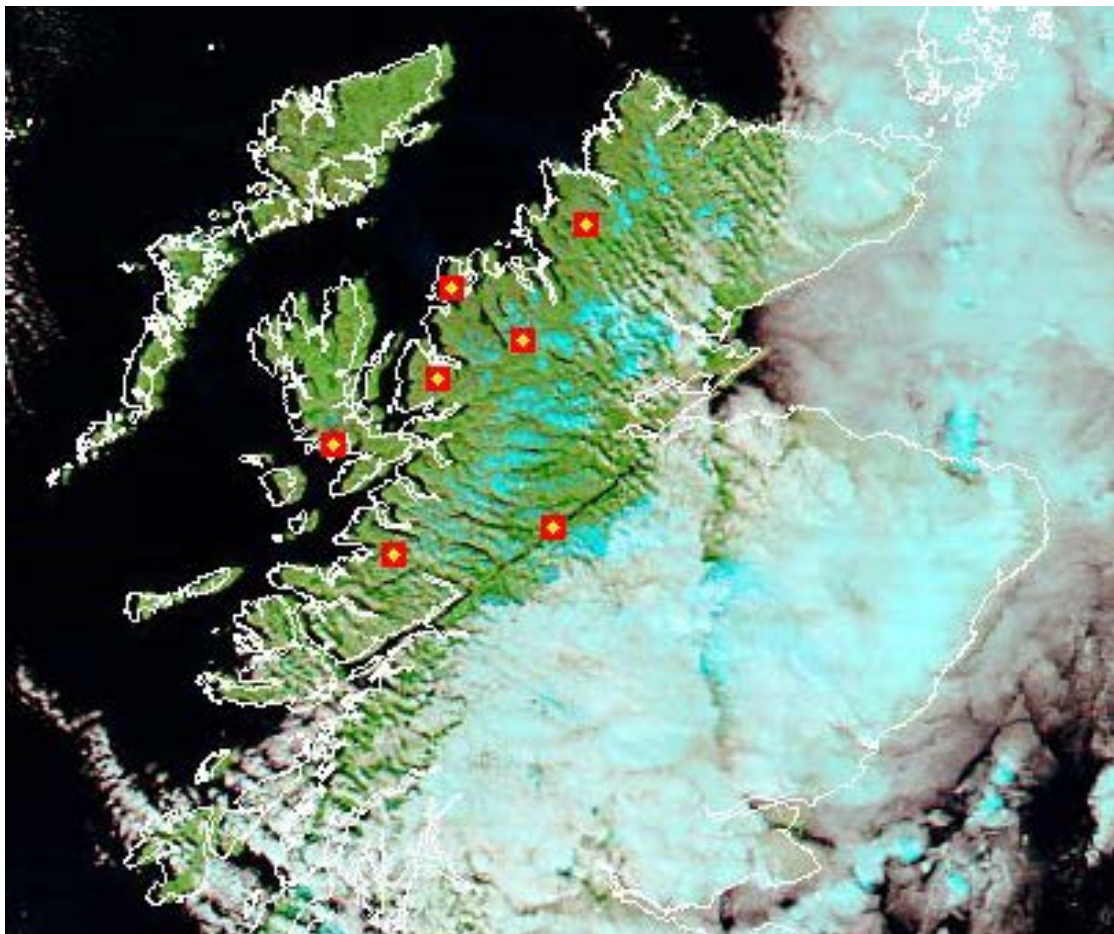


Figure 1: Hotspots (red symbols) in northwest Scotland detected through gaps in the cloud by NASA's MODIS sensor on the Terra satellite, 2nd April 2013, 11:58 hrs. The sensor records heat, or thermal energy, emitted from active fires. The false colour composite image is made from MODIS' reflected light bands; green is vegetation, light blue is snow and white is cloud. Source: DLR Center for Satellite-Based Crisis Information, MODIS Fire Service: [Satellite overpasses](#), [Interactive map](#).

Not all hotspots are active fires, and not all fires are detected by MODIS, typically because of cloud ([more information](#)). Neither the heat nor light bands of the sensor can image through cloud, as Figure 1 shows.

The fire near Fort William on 2 April was not detected as a thermal hotspot on Figure 1, but the sky was clear enough after the fire for MODIS to record the burned area using its reflected light bands (Figure 2).

The charred ground of the fire scar reflects light differently from live vegetation. This is recorded by the sensor's optical bands. The burned area is updated as further cloud-free images are acquired, up to the point where the vegetation regenerates and the fire scar can no longer be detected, or cloud cover gets in the way ([more information](#)).



Figure 2: Burn scars in Fort William area recorded by NASA's MODIS sensor on the Terra and Aqua satellites after the 2 April 2013 wildfires. Yellow shading shows the burned areas on a true colour Google Earth image. The sky was clear enough between 2 and 9 April for the sensor to record light reflected from the charred ground. Source: Burned area layer, [European Forest Fire Information System \(EFFIS\), Current Situation interactive map.](#)

A fire in Wester Ross, Caithness and Sutherland was detected both as active fire hotspots on 2nd April, and as a burned area between 2nd and 9th April (Figure 3). The shading of the burn scar indicates its age relative to the date the EFFIS database was queried (11th April 2013). Orange shading shows that it was detected in one to seven days before 11th April 2013. Yellow shading indicates a burn scar detected seven to 30 days ago.



Figure 3: Two wildfires in Wester Ross, Caithness and Sutherland, NW Scotland, detected by NASA's MODIS sensor on the Terra and Aqua satellites. Hotspots (yellow squares, with red boundaries added for emphasis) indicate the approximate position of the active fire front at the times of the overpasses on 2 April 2013. Shading of the burned area indicates the age relative to date of query (11 April 2013). The 680 hectare (6.8 km²) orange shaded burn scar was imaged between 2 and 9 April, and the older 190 (1.9 km²) hectare yellow one, between 1 and 2 April. Source: [European Forest Fire Information System \(EFFIS\), Current Situation interactive map](#).

The BBC website has dramatic [night-time pictures](#) of the fire near Fort William. Reports can be found on [BCC](#), [Telegraph](#) and [Guardian](#) websites, and on STV:

- [Firefighters were battling a two-mile wide wildfire in the Highlands](#),
- [Firefighters tackle huge grass blaze threatening island homes](#),
- [Last of the wildfires in the Highlands have been extinguished](#)
- [Highland landowners warned over hill burning as wildfires rage](#)
- [One million square metres of land burned after 24 hours of wildfires](#)
- [Firefighters tackle around 80 wildfires in Highlands and Islands](#)

Northern Ireland and Eire also had fires between 2nd and 8th April 2013. In England, hotspots were detected in Lancashire on 1st April, South Wales on 2nd and 6th April, and East Anglia on 2nd.

Julia McMorro, 11 April 2013, updated 10 December 2014

http://www.kfwf.org.uk/assets/documents/wildfires_in_northwest_Scotland_v2.pdf