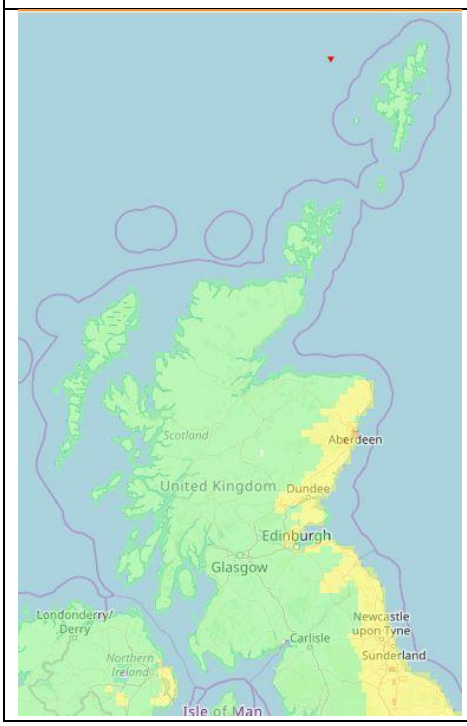
Wildfire Danger Assessment for Monday 25th – Friday 29th March 2019 for Scotland.

Wildfire danger assessments are made on behalf of the Scottish Wildfire Forum. They are done on a broad area basis. For more local risk assessments both the seasonal condition of fuels and local weather conditions should be taken into account.

The overall fire danger assessment is VERY HIGH rising to EXTREME for eastern Scotland for 25/03/19 - 29/03/19.

Ignition Potential - Fine Fuel Moisture Code:

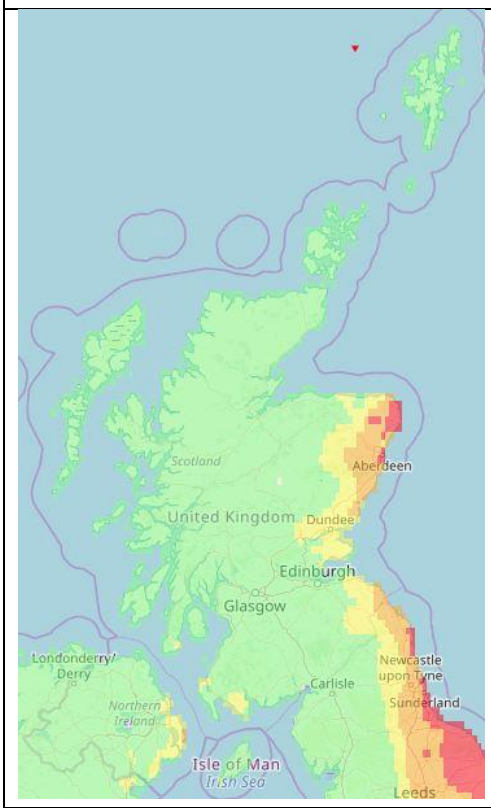
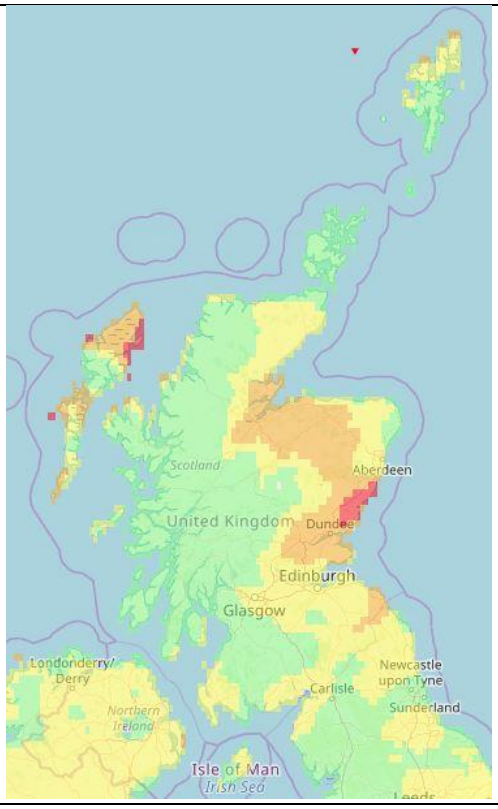
EFFIS Fine Fuel Moisture Code forecast 24/03/19 for 25/03/19	EFFIS Fine Fuel Moisture Code forecast 24/03/19 for 29/03/19
	

The EFFIS FFMC forecast for the period 25/03/19 to 29/03/19 indicates a HIGH rising to VERY HIGH ignition potential for eastern Scotland.

Images courtesy of European Forest Fire Information Service (EFFIS)

EFFIS FFMC & ISI Fire Danger class bands:

The scientific evidence indicates that significant numbers of wildfires often occur in the UK in the when FFMC is above 80 and ISI above 2. Any yellow area on the map indicates an FFMC of more than 83 and for ISI, shown below, yellow indicates values between 3.2 - 5.

EFFIS Initial Spread Index forecast 24/03/19 for 25/03/19	EFFIS Initial Spread Index forecast 24/03/19 for 29/03/19
	

<u>The Initial Spread Index for most of Scotland is above 2 in central and eastern Scotland where there will be a HIGH to VERY HIGH spread potential.</u>

Seasonal condition of the fuels:

At this time of year, the late winter, the seasonal condition of the fuels (vegetation) will be reacting most to the combination of frost and warm dry weather and can reach very low moisture contents. There is a lot of dead grass and dead heather left over from last year.

The heavy rain and snow over the last month has wetted the deeper fuel layers.

General weather forecast information:

Snow and rain this weekend will be followed by an increasing warm settled period, with high pressure centred to the SW of Ireland. These conditions are likely to continue through until Friday. There is some rain forecast for the NW Highlands & Islands over the next couple of days. A band of rain is forecast to cross the country from the north west on Friday. Winds are north westerly low to moderate, except in eastern Scotland where winds are faster.

Discussion:

The key issue now is the low seasonal moisture in live fuels, and the drying out of the moss and litter layer through the next week. Snow is melting in the hills and the heather, moss and litter layers can dry out quickly. This will happen fastest at lower altitudes and on south facing slopes but is likely to affect all areas by the end of the week.

Both FFMC and ISI are rising through the week. There is a gradient with higher index values in the east, which gradually lower further west. Where the FFMC is high all surface fuel layers will ignite readily and burn quite hot, where ISI is above 2 in the centre and east of Scotland spread rates could be fast. There will also be increasing potential for re-ignitions from the upper moss and litter layer.

People conducting Muirburn should be cautious. Fires could burn hot with big flames, fast rates of spread, high fire intensity and therefore be difficult to extinguish.

Fire Danger for period:

The fire danger for eastern Scotland is VERY HIGH 25th – 28th March, rising to EXTREME for 29th March 2019.

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Appendix A: Background information

The EFFIS system is based on the Canadian Fire Weather Index system, of which FFMC, DMC, DC & ISI are a sub-indices. FFMC looks at the dead fuel moisture of the litter layer on the soil surface. The Initial Spread Index (ISI) is FFMC plus a wind function. DMC & DC look are deeper soil moisture indices.

Table 1 EFFIS fire danger class bands:

	VERY LOW	**LOW**	**MOD**	**HIGH**	**VERY HIGH**
	Green	Yellow	Brown	Red	Black
FFMC	< 82.7	82.7 - 86.1	86.1 - 89.2	89.2 - 93	>= 93
DMC	< 15.7	15.7 - 27.9	27.9 - 53.1	53.1 - 140.7	>= 140.7
DC	< 256.1	256.1 - 334.1	334.1 - 450.6	450.6 - 749.4	>= 749.4
ISI	< 3.2	3.2 - 5	5 - 7.5	7.5 - 13.4	>= 13.4

EFFIS fire danger classes were originally created to support decision making in Mediterranean areas. The equivalent fire danger with typical grass and shrub fuel types in the British Isles is significantly lower. European Forest Fire Information Service (EFFIS) can be viewed at:

http://effis.jrc.ec.europa.eu/static/effis_current_situation/index.html

The weather data that is used in the EFFIS Fire Weather Index model is from the European Centre for Medium Range Forecasts (ECMWF).