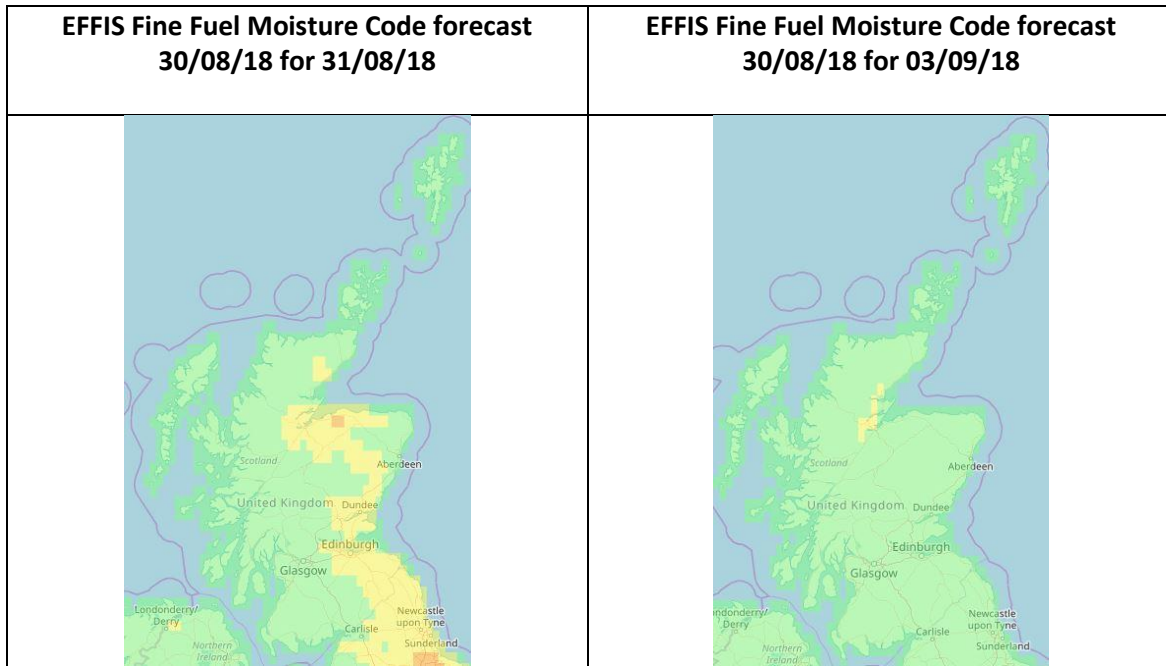


Wildfire Danger Assessment for Saturday 1st – Monday 3rd September 2018 for Scotland.

Wildfire danger assessments are made 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 HIGH for eastern Scotland for 01/09/18 - 02/09/18.

Ignition Potential - Fine Fuel Moisture Code:



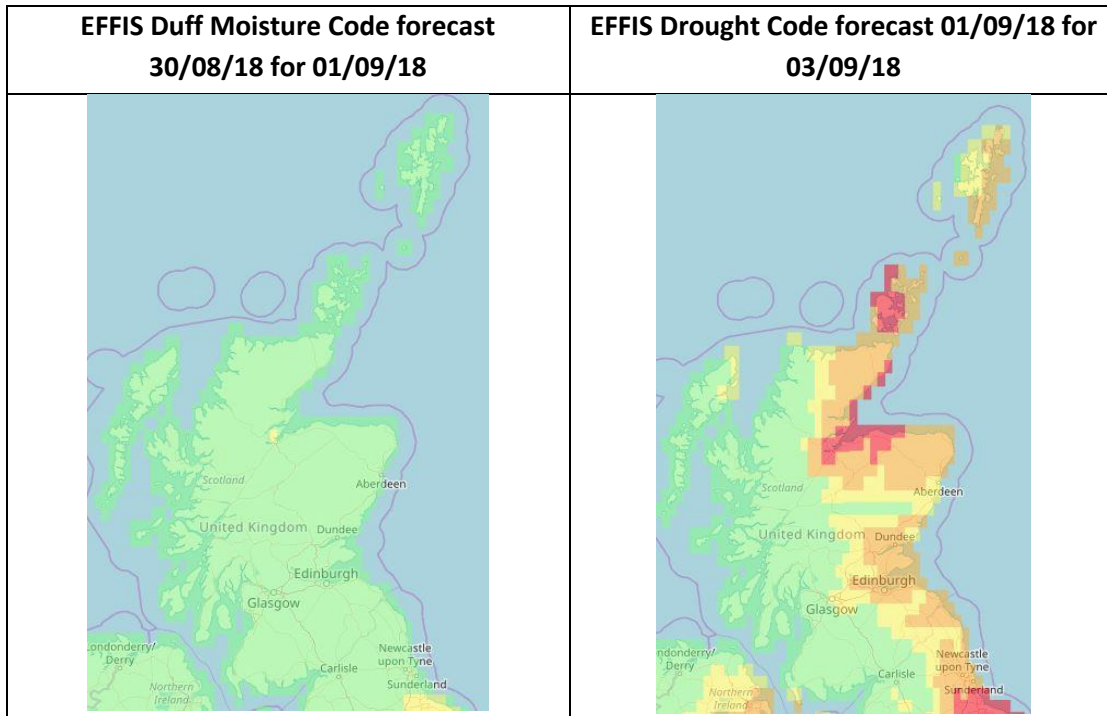
The EFFIS FFMC forecast for the period 01/09/18 to 02/09/18 indicates a HIGH ignition potential for eastern Scotland. This reduces by 03/09/18.

Images courtesy of European Forest Fire Information Service (EFFIS)

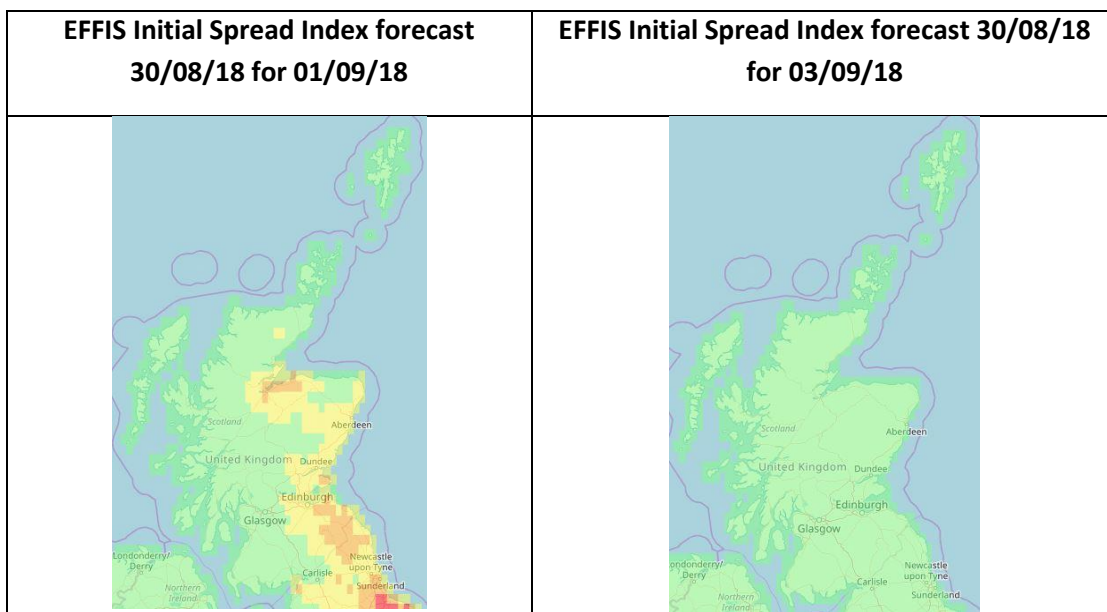
EFFIS FFMC Fire Danger class bands:

The scientific evidence indicates that significant numbers of wildfires often occur in the UK in the when FFMC is above 80. Any yellow area on the map indicates an FFMC of more than 83 and the brown areas are over 86 and red is over 89.

At this time of year at the start of autumn the seasonal condition of the fuels (vegetation) will be reasonably uniform over Scotland. There has been rain and re-growth of grass after the drought earlier in the summer. All areas should have vegetation that is growing and therefore have some moisture in the live plant.



The Duff Moisture Code (1.2cm - 7cm) and the Drought Code (7cm – 14cm) give us an indication of the dryness of the deeper organic soil layers. The DMC soil layer is moister due to recent rain. The Drought Code is still indicating dry soils at depth in the east reflecting the longer term drought.



The Initial Spread Index (ISI) is based on FFMC, plus an additional factor for wind. This ISI forecast for the period 01/09/18 to 03/09/18, indicates potential for fires to spread in eastern Scotland on 31st August which drops rapidly by 3rd September.

General weather forecast information:

There has been mixed rain/sunshine in Scotland recently. Further bands of showers will pass across Scotland with heavy rain on Sunday. Winds across Scotland are moderate with variable directions, initially southerly turning northerly by next week. Maximum temperature will be around 20 degrees centigrade. Humidity levels are low mid-day in the east initially then rise as the rain passes through and then gradually getting lower into next week when a high pressure system starts to dominate.

Discussion:

The key issue now is wetness of dead fuels, the moss and litter layer and deeper peat. The high FFMC on the 1st September, and high ISI indicate that all surface fuel layers can support fast moving fires.

However this changes rapidly with rain. The DC is on an east-west gradient. It is still high in the east and but lower and below the smouldering ignition point in the west. Should a wildfire ignition occur over the weekend in the east high fire behaviour and smouldering in the deeper organic soils, could happen the east.

The public should be cautious with any fires in woodland, peat or heather areas and respond to guidance with any high fire risk conditions as per the Access Code.

Fire Danger for period:

The fire danger for eastern Scotland is HIGH 1 -3 September. Then from Monday 3rd September Wednesday 5th September it is low.

M. Bruce
Director
Firebreak Services Ltd
Date 31/08/18

Tel. 013398 86451
Mob. 07967 681807
Em. info@firebreakservices.co.uk
<https://firebreakservices.co.uk>

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).