

## Earth Observation Fact Sheet

### SENTINEL 2

#### Background

This factsheet is part of a series produced by the Yorkshire Peat Partnership (YPP) to share the knowledge developed in the application of open source earth observation technologies for the remote monitoring of peatland habitats.

#### Satellite technology

Earth observation satellites provide us with the capability to analyse current and retrospective data at a landscape scale.

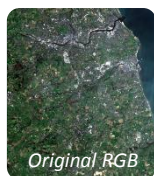
#### Sentinel 2

Part of the European Space Agency's (ESA) Copernicus Programme, Sentinel 2 provides the highest resolution optical data (10m) of any open source satellite. The 10m resolution data allows for the acquisition of higher detailed imagery, resulting in more accurate analysis than the Landsat satellites. However, one drawback of the Sentinel 2 platform is the absence of a thermal band present in the Landsat satellites.

#### Data Products

Level 1C is the most available data product and features top of atmosphere reflectance. Radiometric and geometric corrections are made before the data is uploaded.

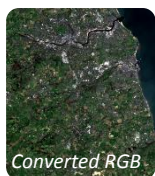
Level 2A is derived from Level 1C and features bottom of atmosphere reflectance. Users can create Level 2A through the Sen2Cor plugin for Sentinel Applications Platform (SNAP) software.



Original RGB



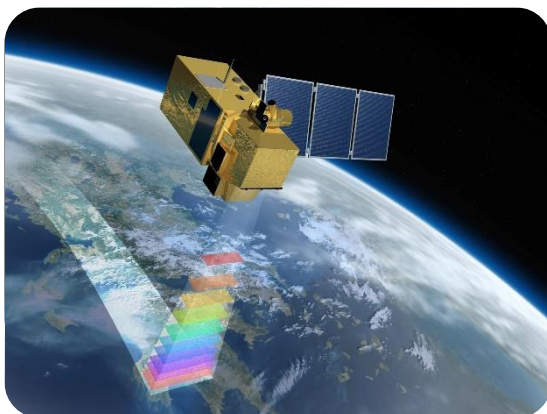
Cirrus band (10)



Converted RGB

#### SPECIFICATION

<b>LAUNCH DATE:</b>	23 <sup>rd</sup> June 2015
<b>BANDS (Resolution):</b>	1 – Coastal aerosol (60m) 2 – Blue (10m) 3 – Green (10m) 4 – Red (10m) 5, 6, 7 – Vegetation Red Edge (20m) 8 – Near Infrared (10m) 8A – Narrow Near Infrared (20m) 9 – Water vapour (60m) 10 – Shortwave Infrared – Cirrus (60m) 11 – Shortwave Infrared 1 (20m) 12 – Shortwave Infrared 2 (20m)
<b>SWATH WIDTH:</b>	290 km
<b>REVISIT TIME:</b>	10 days



Artist's rendering of the Sentinel 2 satellite.  
Credit: ESA

#### Data Sources

Sentinel 2 data can be downloaded for free on the Copernicus Open Access Hub:  
<https://scihub.copernicus.eu>