

Revised draft

Drought Plan 2020: Annex 1m – Brecon Portis WRZ

November 2019



Table of Contents – Annex 1m

1. Brecon Portis – WRZ Reference no. 8108	127
1.1. Brecon Portis Water Resources Overview.....	127
1.2. Drought Triggers.....	128
1.3. Assessment of Drought Risk	129
1.4. Drought Management of the WRZ.....	129

Table of Figures

Figure 1 - Map of the Brecon Portis WRZ.....	127
Figure 2 - Brecon Portis Drought Action Zone.....	128

Table of Tables

Table 1 - Licensed sources in the Brecon Portis WRZ.....	128
Table 2 - Relative abstraction vs catchment comparison.....	129

1. Brecon Portis – WRZ Reference no. 8108

1.1. Brecon Portis Water Resources Overview

Brecon Portis is a small WRZ in South East Wales, immediately North of the SEWCUS WRZ (see Figure 1). The water resources within the zone consist of the Usk impounding reservoir (shared with the Tywi Gower and SEWCUS zones), and our groundwater abstractions at Brecon. A list of our raw water sources for the zone is presented in Table 1.

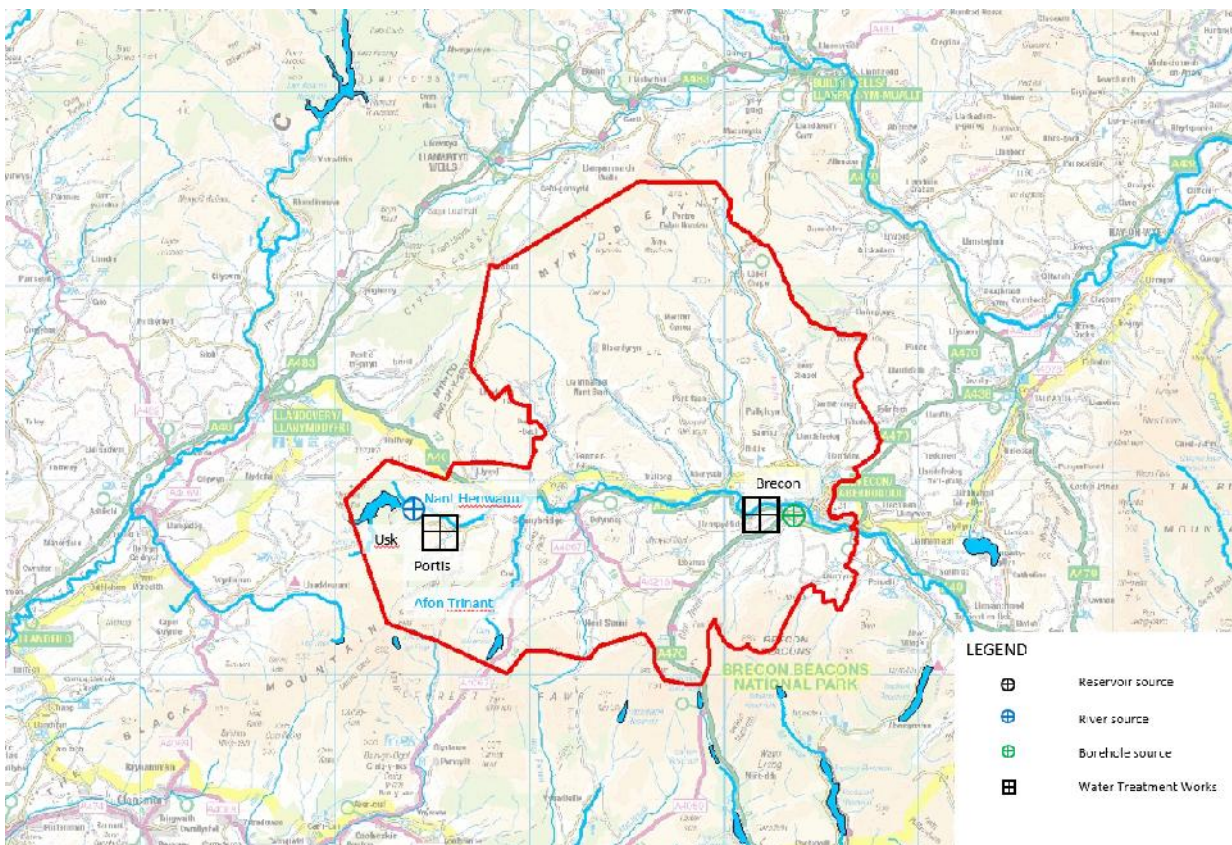


Figure 1 - Map of the Brecon Portis WRZ

A small volume of water is abstracted from the Usk reservoir to serve the Sennybridge area however our boreholes at Brecon meet the larger proportion of the WRZ demand. These boreholes abstract from the river gravels adjacent to the River Usk and therefore water is released from Usk reservoir to support abstraction when flows in the River Usk are low. We also make releases to support our lower River Usk abstraction at Prioress Mill which supplies the SEWCUS WRZ.

There are no imports or export of water in the zone.

Site Name	Licence No.	Source Type	Status
Usk Reservoir	20/56/54/0001	Impounding Reservoir	Operational
Nant Henwaun Intake	20/56/54/0003	Stream Intake (transfer to Usk reservoir)	Operational
Brecon	20/56/44/0016	Boreholes	Operational

Table 1 - Licensed sources in the Brecon Portis WRZ

1.2.Drought Triggers

The drought status of the zone is assessed by the water demand at any time in relation to the maximum water treatment works capacity as shown in Figure 2. Our experiences during the 2018 summer drought have shown that we are able to mobilise and maintain a large scale tankering operation and so we are confident that we can move water across and between adjacent zones to any areas of high demand. The use of the DAZs are described in more detail in Section 2 of the main report and the DAZ is shown below in Figure 2.

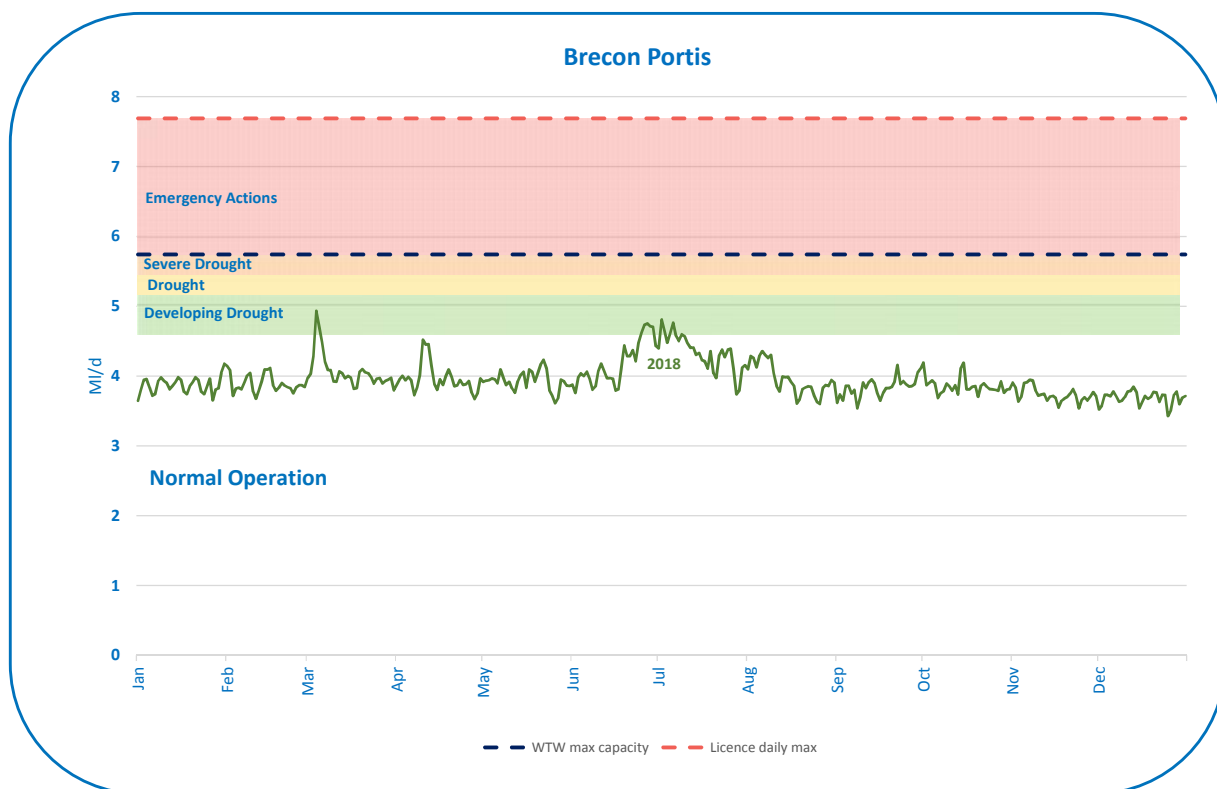


Figure 2 - Brecon Portis Drought Action Zone

1.3. Assessment of Drought Risk

Drought Scenario testing has been undertaken for all of our water resource zones that are not predominantly supplied via impounding reservoirs, using an assessment of our historic inflow and demand sequences. Our WRMP19 supply capability assessments confirmed that the water resource of the Brecon Portis zone is limited by the capability of our assets to produce and distribute water to our customers, not by the volume of raw water we have available. Our ‘drought’ concern is therefore related to our ability to meet peak customer demands during a prolonged hot, dry spell rather than running out of raw water. Table 2 shows our raw water sources of supply in the zone together with the capability of the associated water treatment works and an indication of the relative size of the abstraction compared to the river catchment or reservoir it is abstracting from. This confirms why we are confident that a lack of water resource during a severe event will not be the restriction on our ability to meet customer demand.

Site Name	Source Type	Source maximum output* (MI/d)	Q 95 (MI/d)	Reservoir Capacity (MI)
Brecon Boreholes	Borehole	4.3	106	
Portis	Reservoir abstraction	1.92		12,016

*WTW maximum output as limited by WTW capacity and daily licence

Table 2 - Relative abstraction vs catchment comparison

Figure 2 shows the DAZs and how demands experienced in summer 2018 compare against these. During June to July 2018 we saw demand levels increase by around 30% above their ‘normal’ level in these WRZs and so we are confident that we have a robust position in that demand would need to increase by over 60% before we would have concerns around our capability to meet customer demands.

1.4. Drought Management of the WRZ

As the identified drought risk in the zone is low then our management philosophy is to ensure we operate our treatment works and boreholes efficiently and take all necessary actions in good time, in order to maintain this high level of drought resilience.

The following sections describe the operation of the zone as we move into a drought period and the actions that we will take to ensure that we minimise the impact on our customers.

1.4.1. Normal Operation

During normal weather conditions we have no resource concerns over our ability to meet demands at both Portis water treatment works which is supplied by Usk reservoir, and our treatment works at Brecon which are supplied by the boreholes.

1.4.2. Developing Drought/ Drought/ Severe Drought Action Zone

Given the storage available in Usk Reservoir and the performance of the boreholes, it is considered that this WRZ is unlikely to be at risk of a shortfall in raw water. However, there could be concerns around peak demands for water exceeding the capacity of our treatment works. Should this materialise then we would either investigate the potential to lift operational restrictions in our water treatment systems

to increase the water output, up to the maximum abstraction volume of the licence, or import supplementary water from adjacent zones by road tankers.

1.4.3. Emergency Action Zone

We have set our trigger level for the Emergency Action Zone as the point at which demand for water is greater than our supply capability. At this point we would be in an exceptional drought and may need extreme measures in order to maintain supplies to our customers.

To enact these extreme measures we would need to apply to Welsh Government for an Emergency Drought Order that would allow us total discretion on the uses of water that may be prohibited or limited including the implementation of rationing measures such as the use of standpipe filling points, rota cuts in water supply or widespread pressure management. These are last resort actions, which at any other time we would deem unacceptable, and would only be used when all other reasonable drought measures have been implemented.

1.4.4. Supply-side drought management action

Given the resilience of the zone, it is not considered necessary to develop supply-side options. There are therefore no associated Environmental Assessment Reports (EARs) and so we have not completed Appendix G for this WRZ.