

Chlorophyll-a: Some algae but not too much as when excessive algal growth occurs the decay of this algae will be accompanied by the rapid multiplication of respiring bacteria. They will use up dissolved oxygen in the river meaning there is not enough for the Brown Trout.

PH: 4.1-9.5

Water level: 0.3m  
minimum

Dissolved oxygen:  
>9mg/L

### Optimal conditions for a healthy Brown Trout



Electrical conductivity:  
100-2000 $\mu$ S/cm (typical  
values for a chalk river)

Tryptophan (an amino acid): Low levels of tryptophan are optimal. High levels indicate that there is a high presence of organic matter (which can come from sewers or farm waste), this leads to fish deaths as microbes breaking down the waste use dissolved oxygen.

Water temperature:  
7-18°C

Turbidity (cloudiness of water): Need the water to be clear and not cloudy as trout lay their eggs in the riverbed. Sediment that is transported in the water can settle on to the riverbed and smother these eggs preventing them from developing and hatching.