

ABBREVIATIONS AND GLOSSARY OF TERMS

1. **Activated sludge**
A secondary (biological) treatment process in which sewage is aerated with a biologically active sludge causing the microorganisms to remove pollutants from the sewage. A further settlement stage is required to separate the sludge.
2. **Baffle**
A device used in a tank to promote a more uniform flow through the tank and to avoid short-circuiting.
3. **Biochemical oxygen demand (BOD)**
The amount of dissolved oxygen consumed by microbiological action when a sample is incubated, usually for 5 days at 20°C. It is a measure of the concentration of biologically degradable pollutants in the sample.
4. **Biological filter (Biofilter)**
A type of secondary treatment process which consists of a bed of inert material (moulded plastics, clinker, stones etc.) on to which microorganisms will grow so as to promote aerobic degradation of sewage.
5. **Comminutor**
A grinder or shredder that converts bulky solid wastes into small particles.
6. **Dry weather flow (DWF)**
The average daily flow to the treatment plant without the influence of stormwater infiltration due to rainstorms.
7. **Extended aeration**
The extended aeration process is a type of secondary (biological) treatment. It is a modification of the conventional activated sludge process and operates in the endogenous phase of growth, in which there is not enough food remaining in the system to support all of the microorganisms present. The microorganisms are aerated and suspended within the sewage, where aerobic degradation of the pollutants takes place. Residence time is of the order of 24 hours compared to around 6 hours in conventional activated sludge tanks.
8. **Mixed liquor suspended solids (MLSS)**
The concentration of dry solid (in milligrams per litre) of mixed liquor in the aeration tank of an extended aeration/activated sludge plant.
9. **Primary treatment**
The treatment of sewage to a stage where the settleable pollutants are removed by physical means (usually gravity sedimentation).

APPENDIX 1 (Cont'd.)

10. **Primary sedimentation tank**
A primary treatment process. It is a gravity sedimentation tank in which the majority of settleable solids are removed from the crude sewage flowing through it. It is placed before the secondary (biological) treatment processes.
11. **Rotating biological contactor (RBC)**
A type of secondary treatment process. It is a unit consisting of a series of closely spaced, parallel discs, mounted on a rotating shaft which is supported just above the surface of the waste water to be treated. Microorganisms grow on the disc surface where aerobic degradation of the pollutants takes place.
12. **Secondary sedimentation tank**
Part of the secondary treatment process (e.g. biological filters or an activated sludge plant) in which settleable solids or humus resulting from the degradation of pollutants are separated from the effluent.
13. **Secondary treatment**
Also called biological treatment, referring to the treatment of sewage to a stage where the pollutants (settleable, colloidal and dissolved) are removed biologically by the action of microorganisms.
14. **Septic tank**
A primitive type of primary treatment process. It takes the form of a settlement tank in which the sludge is retained for sufficient time for the organic matter to undergo anaerobic decomposition.
15. **Sewage**
The water-borne wastes of a community.
16. **Sludge**
A mixture of solids and water produced during the treatment of sewage.
17. **Sludge yield**
The quantity of solids left over at the end of the secondary treatment processes, consisting of dead cells, surplus microorganisms, non-biodegradable matters.
18. **Suspended solids (SS)**
Solids in suspension in sewage liquors as measured by filtration through a glass fibre filter paper followed by washing and drying at 105°C. Expressed in milligrams per litre (mg/L).
19. **Tertiary treatment**
A further stage of treating sewage following secondary (biological) treatment processes, usually by filtering the secondary effluent to remove suspended solids. Consequential removal of residual BOD may also occur.