



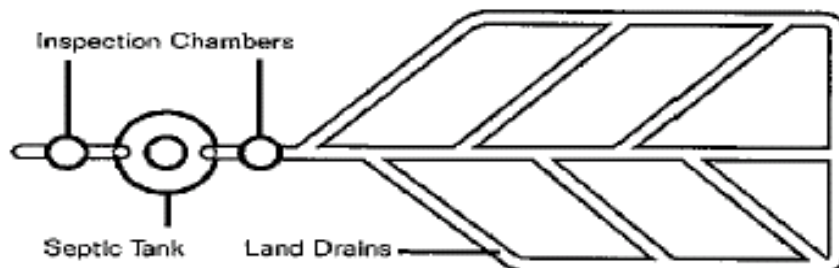
LINCS BUILDING
CONSULTANCY

Guidance Note No. 8

Septic Tanks for
Dwellings

What is a Septic Tank?

Septic tank systems are an alternative method of sewage disposal from properties, usually in rural areas, not served by public sewers. A septic tank is basically a holding tank into which the sewerage from a dwelling drains. The liquid part of the waste is separated and then leaves the tank via a system of land drains while the solids are held within the tank.



The use of septic tanks will only be considered when no suitable public sewers are available within 30m of the site.

To avoid pollution, health hazards and nuisance it is important that applicants, developers, etc. contact Building Control at an early stage. A Building Control Surveyor will give simple, clear advice in order to ensure that the site is suitable for effluent disposal and for access to allow the tank to be emptied. It is good practice for tanks to be sited at least 7m from any habitable part of the building and within 30m of a clear vehicular route to facilitate de-sludging.

Size -

The size of a septic tank will depend on the number of occupants of the building, the minimum size allowed is a 2.7 cubic metres (2700 litres) below the level of the inlet for up to 4 users and increased by 180 litres for each additional user.

Type & depth of sub-soil

Free draining sand and gravel's offer the best conditions. Clays, etc. may require boreholes. A Building Control Surveyor can be available to monitor percolation tests.

Location

Steep sloping sites should be avoided. Sites should be remote from ditches, streams and wells.

Drainage Field

The effluent from a septic tank system is usually discharged to the drainage field via a series of perforated drains, as shown above.

Safety

Tanks should be covered or fenced in. Access covers should be of durable quality to resist corrosion and must be lockable to prevent easy removal by children.

-fabricated versions, usually constructed of glass fibre, easy to handle and easy to install.

What is a percolation test?

A percolation test must be carried out on the area of land chosen and the test results forwarded to your Building Control Surveyor. To carry out a percolation test follow these steps.

Excavate three holes down to the anticipated level of the outfall pipes from the tank. The holes should be roughly in the area where you propose to lay the outfall drainage. Dig a 300mm square test hole 250mm deep in the bottom of each excavation. Fill each test hole with water and allow to soak away overnight. Next day refill each hole and time how long it takes for the hole to empty completely (this may be several hours) if the water takes more than 6 hours to seep away then the ground should be considered unsuitable.

How do I calculate the required length of outfall drains?

Add together the time (in minutes) for each of the three percolation tests and divide by 12.5. This will give you an average time (in seconds) for the water level to drop by 1mm.

e.g. $45 \text{ minutes} + 35 \text{ minutes} + 38 \text{ minutes} = 118 \text{ minutes}$
then divide by 12.5 $= 9.44 \text{ seconds}$

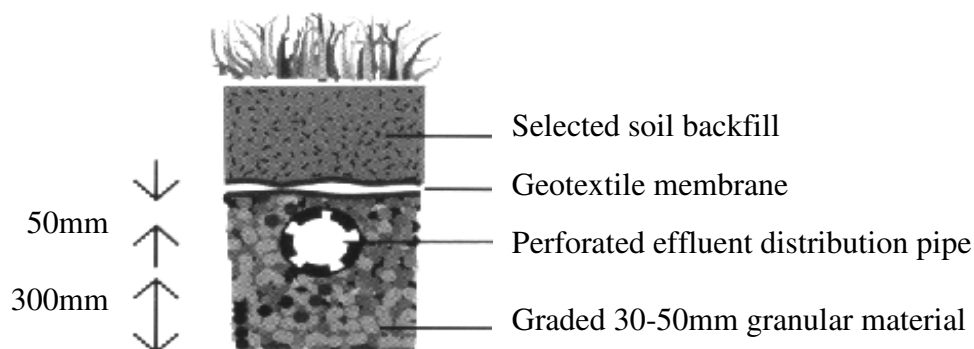
To convert this into the floor area of subsurface drainage trench (m^2), use the following formula: -

$$\text{No of persons} \times \text{Percolation results in seconds} \times 0.25$$

The area determined should be used to calculate either the total floor area of the drainage trench and therefore the length of land drain.

How are outfall drains constructed?

The outfall land drains should generally be laid in a closed herringbone design, using a rigid perforated pipe bedded and surrounded by 150mm layers of rounded aggregate having a minimum size of 30mm with an impervious sheeting laid over the aggregate to separate the soil. Drainage trenches should be from 300mm to 900mm wide and areas of undisturbed ground 2.0m wide should be maintained between parallel trenches.



For further information or clarification please contact your one of the offices on the next page



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If you would like to receive this information in another language or in another format, such as large print, Braille or on an audio tape, please contact Administration at either of the offices shown above.

Please note that these guidance notes are for advice only and may not cover all situations. It is your responsibility to ensure that they are appropriate for use in your particular circumstances.