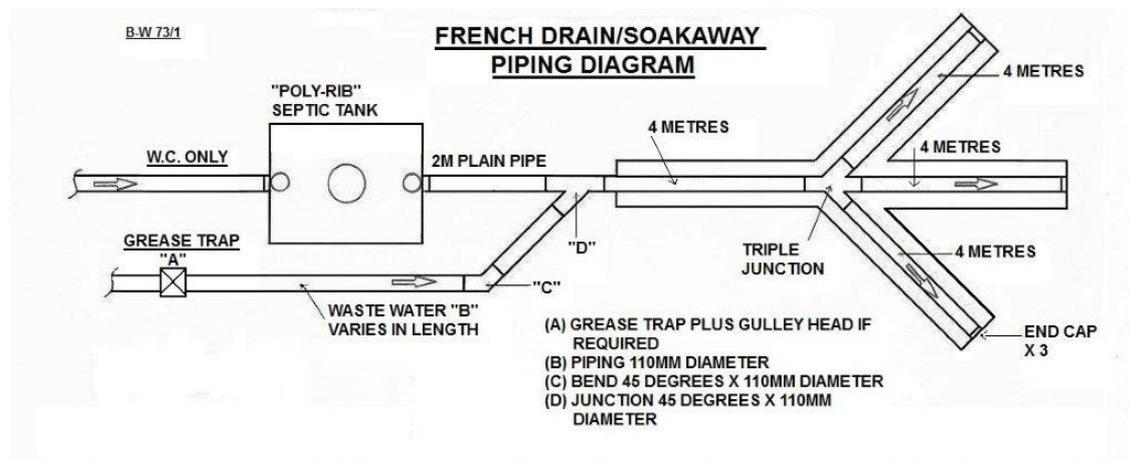


BALLAM-WATERSLOT (PTY) LIMITED

THE FRENCH DRAIN / SOAKAWAY

There is no hard and fast rule in respect of any design or size of a French drain; therefore, the following suggested data is given as a guideline only, and is applicable when read in conjunction with our copyright sketch plans.

The depths and lengths of a herringbone configuration may vary according to site conditions, such as the quantity of water being discharged and soil permeability. Further, the advantages to be considered in the design/location of a French drain are (a) a high percolation rate of the soil in the area, and (b) prolific vegetation in the area, such as evergreen trees or any other form of growth with a year-round water demand. Alternatively, in the planning stages, it might well be advantageous to locate the herringbone drain beneath a garden or lawn.



NOTES:

- (1) The lengths of piping may vary according to soil conditions and volumetric flow.
- (2) The standard domestic kit-form comprises 2 metres x 110mm diameter plain pipe from the septic tank to the soakaway, followed by 16 metres of specially perforated 110mm diameter piping and fittings.
- (3) The grease trap, piping and related fittings are optional extra items.
- (4) The soakaway/French drain should not be located less than 2 metres from the septic tank, but may be located on a downward slope as far as desirable for convenience of site lay-out.
- (5) All sections of drainage work may be extended to suit site conditions.
- (6) All junctions and joints are loose-fitted – PVC welding not required.
- (7) On occasions where the French drain may not be constructed near a borehole, or close to a public stream, or in solid rock, we are able to design and supply a holding tank to be located behind the septic tank, complete with a submersible pump and float switch to transfer the fluid to a suitable site.

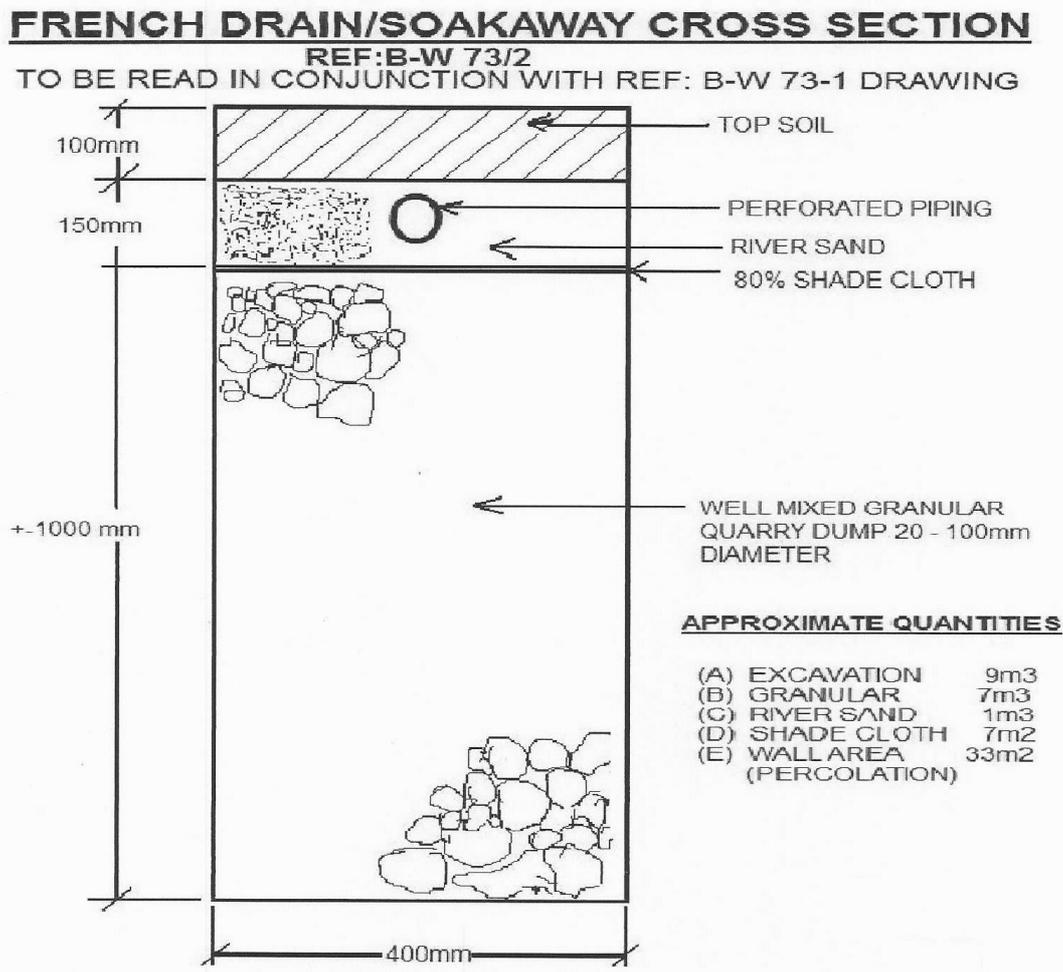
OPTIONAL EXTRA ITEMS:

- (A) Grease trap – plus gulley head, if required.
- (B) Piping 110mm diameter.
- (C) Bend 110mm diameter x 45 degree.
- (D) Junction 110mm diameter x 45 degree.

Until recent years, it was common practice to dig as large a hole as possible and fill it with every size of boulder, brick rubble and stone in sight. Modern day methods have proved that the most efficient type of French drain/soakaway is **one that creates the maximum area of wall surface**, which permits the fluid to exit horizontally in all directions.

For example, in the past a hole of say 3 x 3 x 1 metres would necessitate an excavation of 9 cubic metres, producing a wall percolation area of 12 square metres; our design, as per sketch plans B-W 73/1 and B-W 73/2 (applicable to the "Poly-Rib" septic tank), produces approximately 35 square metres of wall percolation area for an equivalent of 9 cubic metres excavation. The advantages are thus incalculable over designs of yesteryears, and far more simple to construct.

The following specifications and guidelines are copyright to ourselves, although they are offered freely to intended users of our "Poly-Rib" septic tanks.



- (a) Inlet height of “Poly-Rib” septic tank from base level 950mm
- (b) Outlet of “Poly-Rib” septic tank from base level 850mm
- (c) The discharge pipe from the outlet of the septic tank is 110mm diameter. There is no specified distance or fall in the pipe line to where the French drain commences. In other instances, should the septic tank be situated in a low-lying area where the soil would be dense clay, or rock with no percolation tendencies, it would be a simple matter to install a secondary holding tank, complete with submersible pump and float switch, and allow the “grey water” to be pumped to a French drain located on a higher, or more suitable, site. By the same token, a pipe could be extended to a lower area where a suitable French drain would be feasible.
- (d) The size and depth of the French drain should, where conditions permit, follow the guidelines of our Drawing No B-W 73/1, when the following average quantities would be applicable:-
 - (1) Total excavation +/- 9 cubic metres
 - (2) Total granular quarry dump 20–100mm diameter 7 cubic metres
 - (3) Total river sand +/- 1 cubic metre
 - (4) Shade cloth, new or second-hand (80% only) ... 7 square metres
 - (5) Piping (perforated) incorporated in the French drain pipe kit. 16 metres
 - (6) Plain pipe, septic tank to French drain 2 metres
 - (7) Fittings:–
 - 1 x B-W 110mm diameter Triple Junction
 - 3 x 110mm diameter End Caps to perforated piping
 N.B. All pipework and fittings available from ourselves.
- (e) It is of extreme importance that the level of the perforated French drain piping be maintained at a no greater fall than 1 in 500, or, otherwise precisely level throughout. In other words, there should not be any significant fall in the laid pipework, so as to provide for equal distribution of the fluid entering the French drain.**
- (f) The design of the French drain allows for the maximum wall area for percolation. However, by virtue of design, the configuration may be extended ad infinitum according to demand/site conditions.
- (g) We recommend that no French drain should be constructed within a distance of 50 metres from a borehole or a public stream.

All Enquiries may be directed to our Enquiry Form or:

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