

FULL ACCESS SITE LAYOUT, EXCAVATIONS AND SOAKAWAYS

The drawings and instructions included at the end of this guide show: -

1. The **Site Dimensions** layout for the Full Access Composter toilet
2. The required **Excavations** for urine soakaways
3. **Soakaways and Vault Flooding Risk – Sloping Sites – A slope behind the toilet**
4. **Soakaways and Vault Flooding Risk – Sloping Sites – A slope to one side of the toilet**
5. **Soakaways and Vault Flooding Risk – Sloping Sites – Water tables**

As frequency of toilet use and site conditions will vary considerably these notes are provided as an illustration of typical arrangements to assist in the planning of an installation but do not guarantee compliance or adequate performance for a given site. We advise that you consult Building Control and the EA/SEPA/NRW¹ prior to installation.

Although volumes of urine or roof run-off are small soakaways in heavy soil or where there is a high water table may fail under conditions of sustained rainfall due to surface water backing up and flowing into the compost chamber via the urine outlet. The drawings illustrate some possible risks.

It is essential that this toilet is not installed on sites which may become waterlogged or flooded at any time during the year without first consulting NatSol to discuss possible solutions. Remember that sites which are dry in summer may be waterlogged in winter.

Roofwater

Rainwater must be directed away from the building foundations. It is recommended that the roof water is kept out of the urine soakaway and directed to a separate soakaway. A rain butt could be fitted but will almost certainly overflow in winter. The soakaway required for rain could be a pit 600mm square by about 600mm deep filled with broken bricks, or similar, to a depth of 500mm. This should suffice in free draining soil but may need to be considerably larger in heavy soils. See fig 1. A layer of geotextile excludes soil and the pipe enters just beneath this.

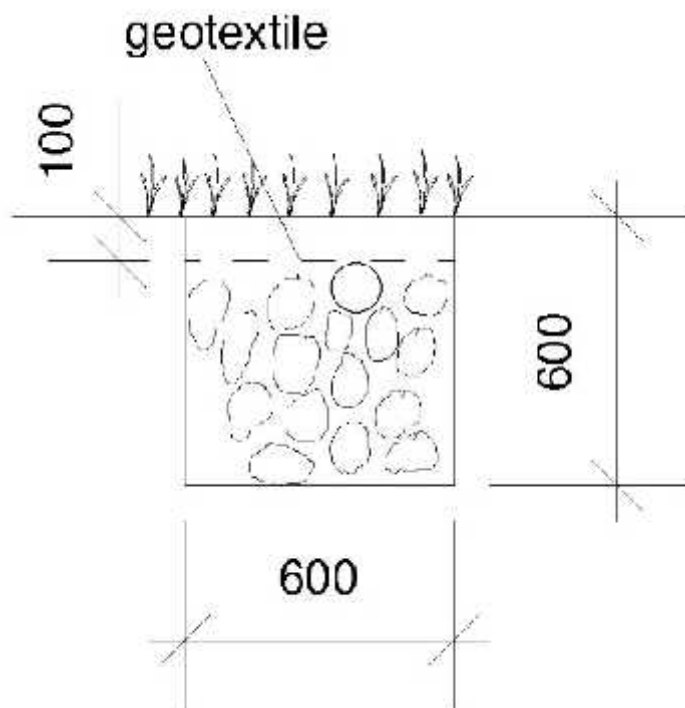


Figure 1. Rainwater soakaway.

¹ Environment Agency; Scottish Environmental Protection Agency; Natural Resources Wales

Urine

For most toilets we now supply this ready made GRC soakaway for urine. You will have one of these for each toilet even if you have several toilets in a row.



Please examine these photographs and see the excavation drawings before installing.



1



2



3



4

Excavate an area of ground measuring 1.5 m by 1.5m and 380mm deep. It should be no closer than **1m** from the side of the vaults and in a position that the urine exit pipe [usually on the RHS of the vaults looking from the front] can be connected easily to the soakaway unit. It should be at least 1m from the rainwater soakaway. If there is no room on the RHS then you could make the excavation behind the toilet vaults. If a LH urine exit would be more appropriate please discuss with NatSol in advance.

You will have to judge the precise excavation depth for the soakaway so that when you cover the membrane with soil the finished ground level is just beneath the aluminium cover on the soakaway unit. The pipe from the vaults should fall at not less than 1:60. To achieve this gradient the soakaway would typically be no further than **3m** away on a flat site. See **Full Access Vault Installation** for pipe connection details.

Position the unit in the centre of the hole so that a 110mm underground pipe from the vaults can connect to the brown 110mm pipe stub projecting through the near end of the unit shown in picture 1. Place **clean hardcore or stone** (no sand) to each side of the unit where the slots occur, picture 2. Cover the whole unit and the hardcore or stone with the geo-textile provided and cover with earth, pictures 3 & 4.

Site constructed urine soakaway

On some sites a urine soakaway constructed on site purely from hardcore may be more appropriate – figure 2. **This will have been agreed with NatSol before supply of goods.** It should be shallow to allow dispersal and treatment in the biologically active topsoil. You will have been supplied with a back inlet gully for installation in the urine pipe. If you have more than one toilet the urine pipes could be connected together - **but only after passing through separate back inlet gullies - one for each toilet.**

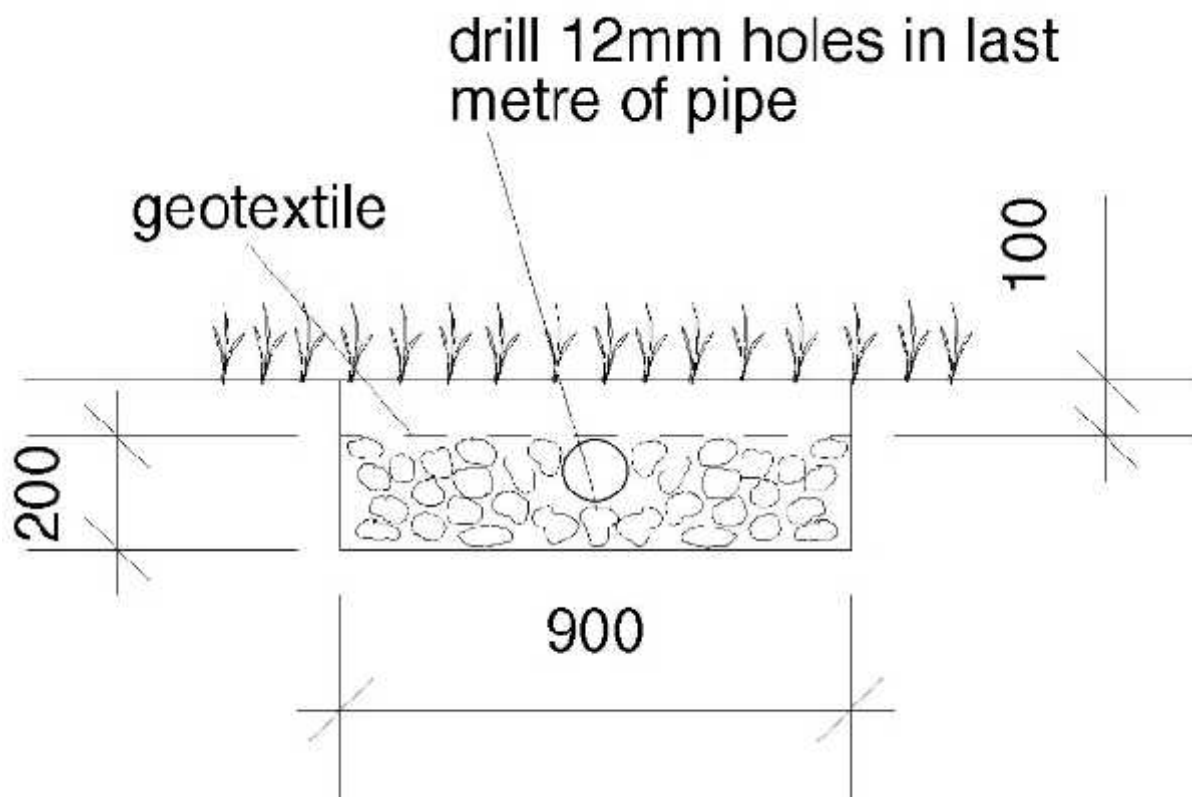


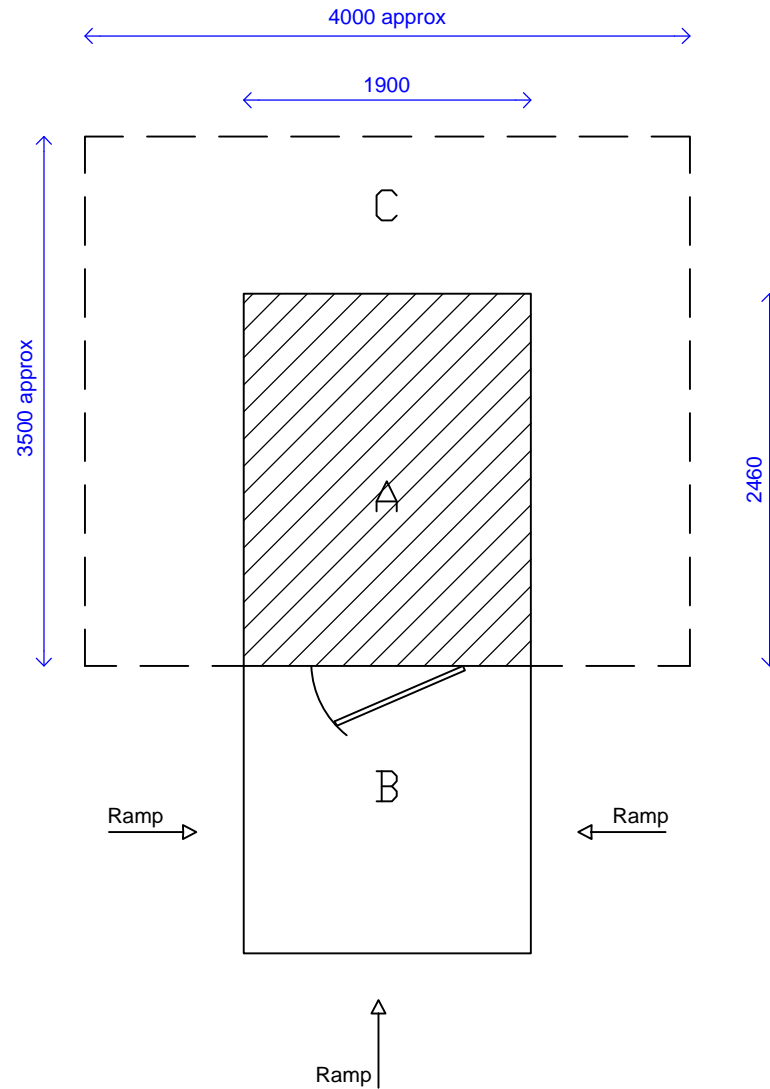
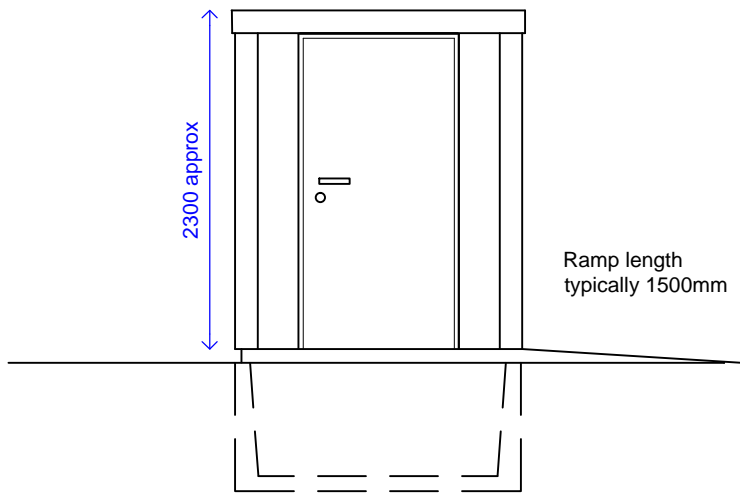
Fig2. Site urine soakaway

NEVER DO THIS ON MULTIPLE INSTALLATIONS: -



Even if a back inlet gully has been installed after the pipes connect air will flow from one toilet to another causing at least one to smell.

T:01686 412653



KEY

Hatched area 'A' is building footprint and excavation area. Excavations approx 2m x 2.5m. Depth as agreed for each site with Natsol in advance but usually between 750mm and 850mm.

'B' is level area in front door about 150mm above surrounding ground level and a minimum 2200mm front to back.

'C' is clear space of approximately 1m wide all round for erection and maintenance

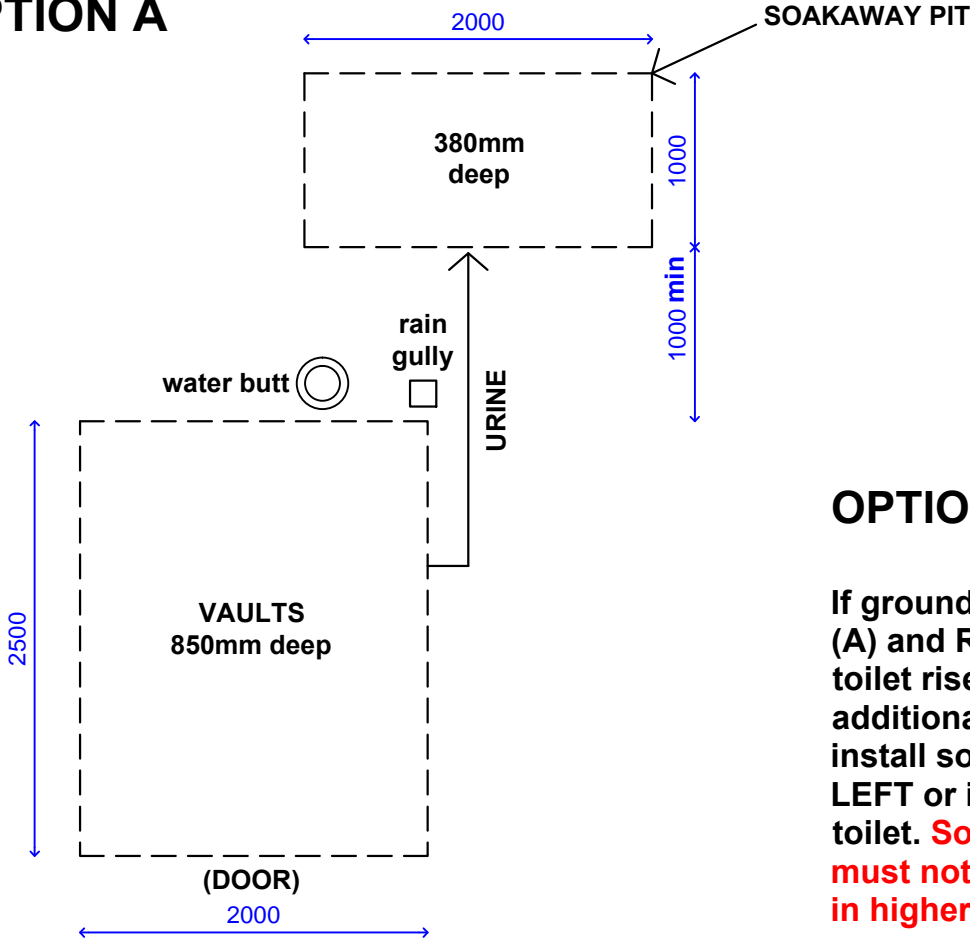
NOTES

1. Door opens out.
2. Ramp from any direction at maximum of 1:12



 THE COMPOST TOILET SPECIALISTS	Compus Twin - Full Access	
	Site dimensions	
Date 15.9.14	Scale 1:50	
Drg. No. 002		
Drn.M.Waterfield		
Natsol Ltd Tel: 01686 412653 www.natsol.co.uk		

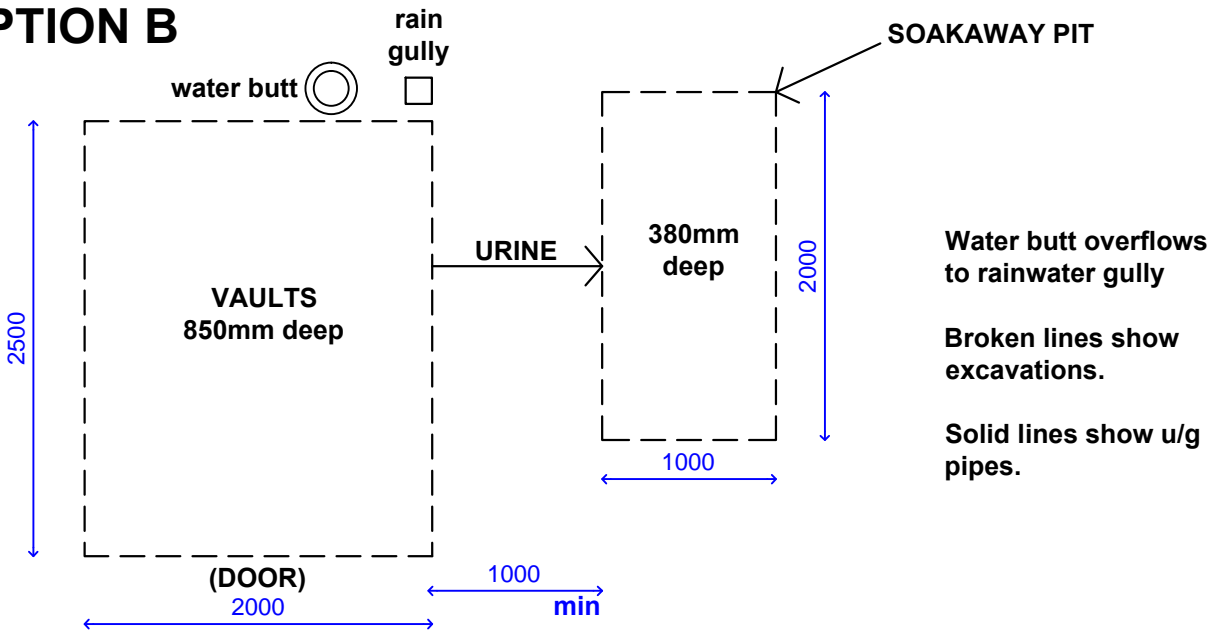
OPTION A



OPTION C

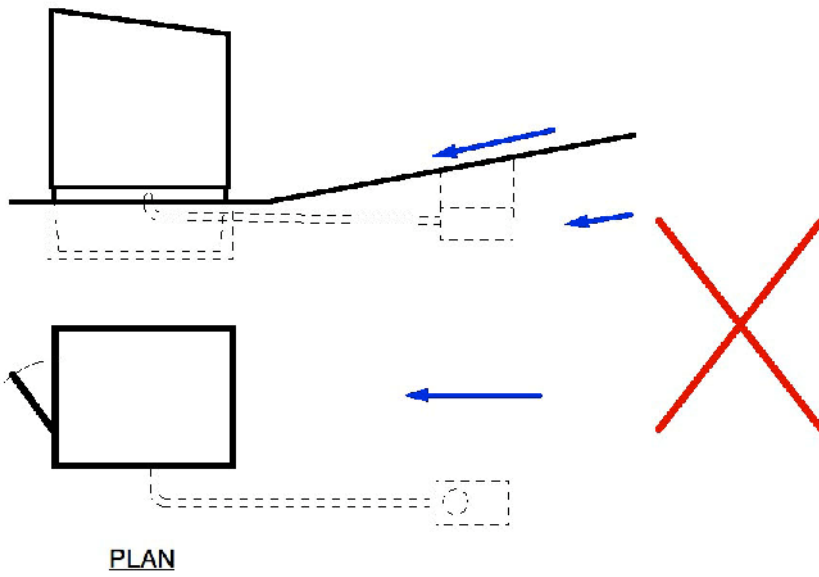
If ground to REAR (A) and RIGHT (B) of toilet rises then use additional pipe and install soakaway to LEFT or in FRONT of toilet. **Soakaway must not be installed in higher ground!**

OPTION B

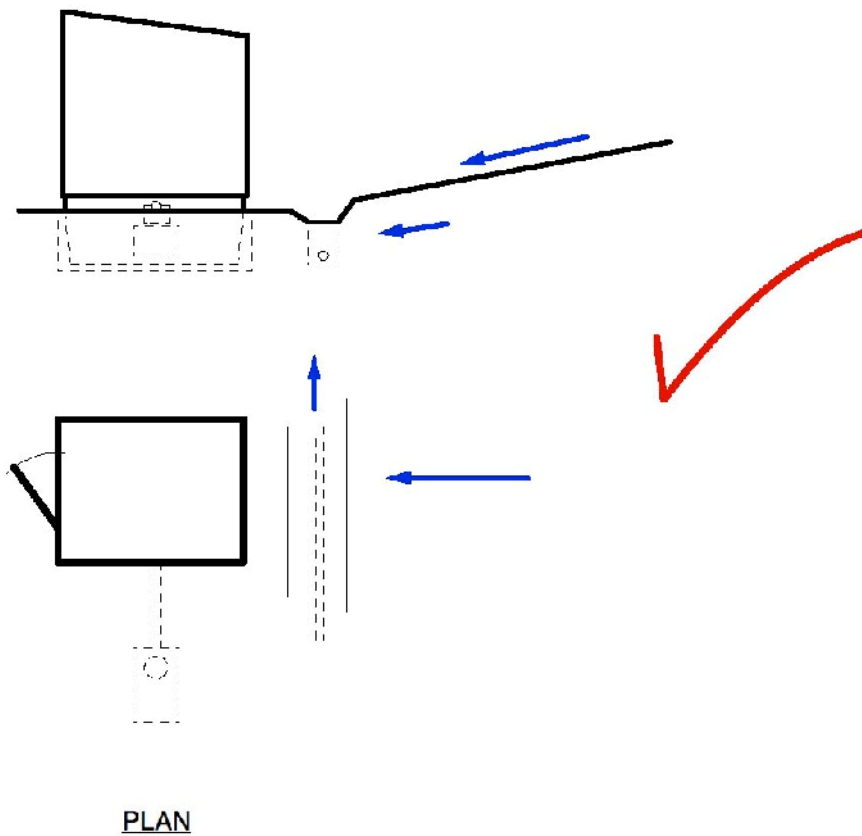


 THE COMPOST TOILET SPECIALISTS	Compus Twin full access	
	Excavations	
Natsol Ltd Tel: 01686 412653 www.natsol.co.uk	Date 20.12.12	Scaled to fit
	Drg. No.	
	Drm. B.Wade	

SOAKAWAYS AND FLOODING RISK – SLOPING SITES

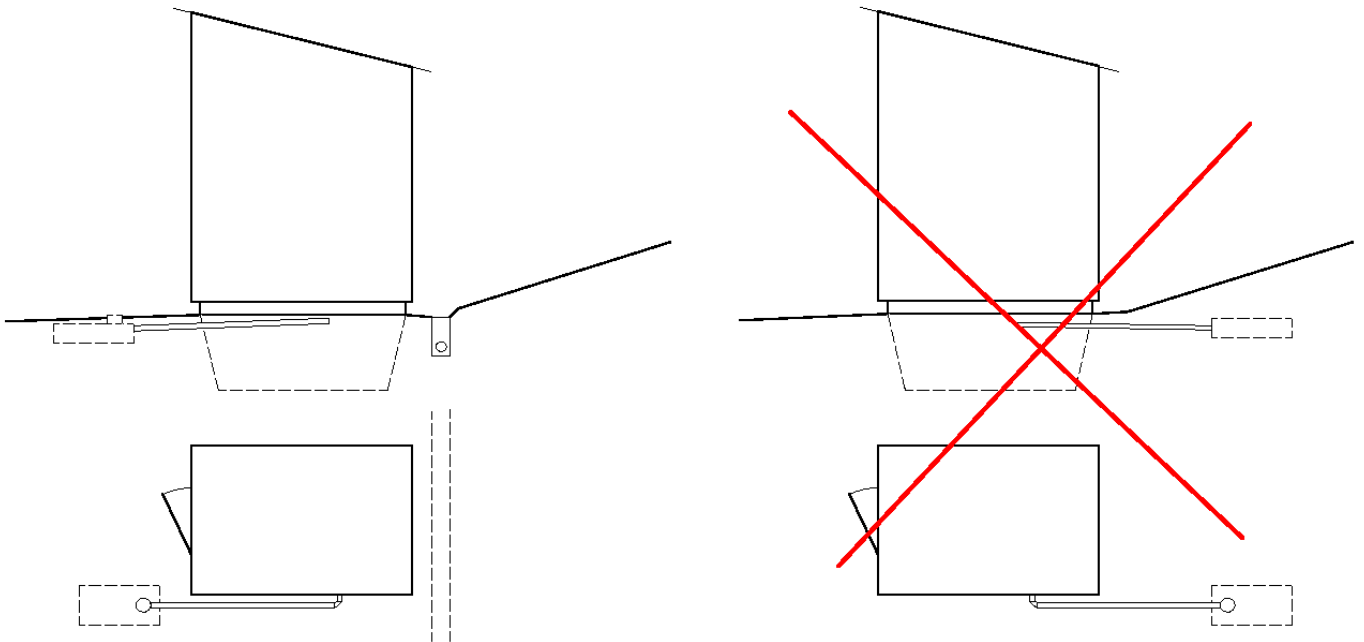


Ground water around the soakaway could cause vaults to flood!!

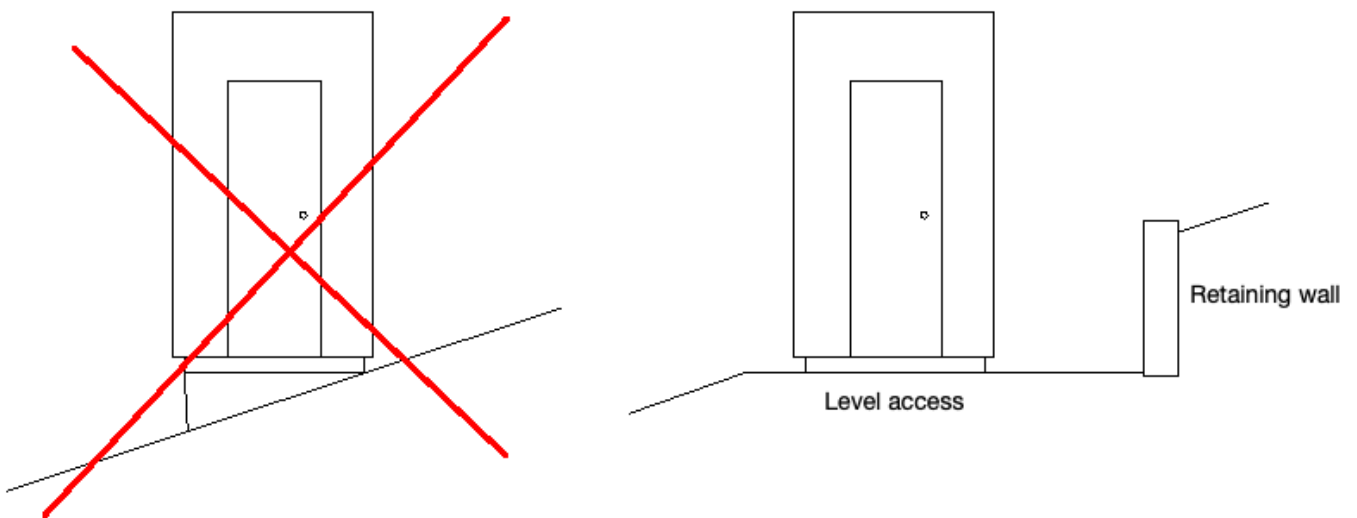


Install a land-drain to prevent flooding of soakaway area.

Siting of toilet soakaway in relation to slopes



Making the toilet accessible on sloping sites



Preventing ground or flood water entering toilet vaults

