



## RESIDENTIAL STORMWATER DISPOSAL

SANDY SOIL SITES  $\leq 350\text{m}^2$

SITES WITH A LOT CONNECTION

REFER TO STANDARD DRAWING ES 40

Any development brings about an increase of impervious or slow draining areas, when compared to the previous use of the land. This results in increased stormwater runoff rates and a decreased time for the excess stormwater, that can now no longer be infiltrated on the development site, to reach the City's drainage system. As a result and given the accumulation of flows, the drainage system can no longer function properly and flooding may occur.

On-site infiltration facilities - soakwells - provide temporary storage for infiltration of stormwater runoff from developments and restrict the discharge from the site at a rate which the existing drainage system is capable of accommodating, mimicking pre-development conditions. Please read these guidelines in conjunction with Standard drawing ES40. Refer to the following standard advice notes and requirements when constructing stormwater disposal systems specific to lots less than or equal to  $350\text{m}^2$ , with predominantly sandy soil conditions, room to provide sufficient numbers of soakwells and good infiltration potential. Variation to these requirements can occur, based on site location, soil environmental conditions, where there are specific subdivisional requirements and where considered justified, and should be discussed with the City of Gosnells' Technical Service Branch. Please contact them on 9397 3000.

1. If the subdivisional development has allowed for or requires a connection to the street drainage system, then the soakwell design is to be based on retaining & infiltrating the all runoff resulting from storm events up to and including the critical 1 in 100 year storm event on site unless otherwise determined by the City of Gosnells Technical Services branch, Required capacities - accounting for clogging safety factors, should be calculated from the spreadsheet available on the City's website - [www.gosnells.wa.gov.au](http://www.gosnells.wa.gov.au). A printout of the completed spreadsheet is to be submitted with the building application
2. If a lot connection is not provided for lots less than  $350\text{m}^2$ , please contact the City of Gosnells' Technical Services branch for advice.
3. A silt pit is required or a soakwell positioned to act as silt pit, with outlet 300mm minimum above the base of pit
4. All soakwells are to be interconnected on site to evenly distribute the stormwater.
5. All soakwell clearances from footings and boundaries to meet Building Code of Australia and geotechnical requirements
6. Soakwells should generally not be deeper than 1.2m. If deeper than 1.2m step irons must be installed
7. 2% grade on all pipes used to interconnect soakwells
8. When pipes are located under the slab they must be a minimum  $\Phi 150\text{mm}$ , SN8 sewer class UPVC
9. Grated inlets are to be installed at the base of all downpipes. (See detail on Standard Drawing ES 40)
10. Where there is an existing spigot from a neighbouring lot and a lot connection pit is provided on that lot, then the silt pit may be omitted on the subject lot
11. The lowest lid level in the interconnected system is to have a grated access opening for emergency overflow paths to the road via the driveway or an alternative City of Gosnells approved flood path
12. Where an overland flow path is not possible, pumping may be required. Liaise with City of Gosnells' Technical Services Branch for this situation
13. When a soakwell or silt pit lid is in a trafficable area it must be fitted with a trafficable lid and have a 150mm precast concrete base
14. Rainwater tanks should be considered to compliment retention and for non-potable use. It is still necessary to dispose of overflows to soakwells
15. Additional sub-soil drainage may be required where shallow groundwater or low permeability subgrade (clayey subgrade/coffee rock) is present

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16. Groundwater depth must be taken into consideration when designing the system. Calibrated correction of the groundwater level, should be made for groundwater that is measured in summer, to identify winter peak ground water levels
17. No topsoil or over burden is to be buried on site. Maximum 100mm topsoil depth
18. The pad must not be cut into the existing finished lot levels, nor should it be left lower than the remaining part of the lot.