**Installation of**

**Household Septic**

**Tank Systems**

**Information for Installers**

**Permits Required**

* Any installation or alteration of a septic tank system requires Council approval and a Permit to Install/Alter from Council prior to works commencing.
* Prior to using a septic tank system final approval from Council and a Permit to Use the system is required.
* To apply for a Permit to Install complete the application form which is available on Council’s website, complete and return. An application fee also applies and a Permit to Install cannot be issued until the fee is paid. Council will conduct a site inspection and assess the application. The applicant will be advised if further information or alterations to the proposed system are required. If the application is satisfactory, a Permit to Install will be issued to the owner.

**Types of Systems Available**

* Council will only allow the installation of specific tank systems that have been approved by the Environmental Protection Authority.
* All new septic tank systems installed within the Cardinia Shire Council must retain wastewater within the boundaries of the property and must not discharge treated wastewater off-site.
* The most common types of septic tank systems available are:
* **Septic Tank and Absorption Trenches:** All household wastewater dischargers to a 3200L septic tank and sub-soil absorption trenches. Split systems with sullage and toilet waste entering separate tanks or absorption trenches will generally not be approved. The length of absorption trench required within the Cardinia Shire Council will vary from property to property, however the Environmental Health Officer may require a soil percolation test to determine the length of trench required.
* **Mechanical Treatment Plant and Absorption Trenches:** All household wastewater is treated to a higher standard in a mechanical treatment plant and discharged to absorption trenches. The length of trench required may be reduced by as much as 50%. It is recommended that you contact the manufacturer prior to installing any mechanical treatment plant to determine the installation conditions.
* **Mechanical Treatment Plant and Surface Irrigation:** All household wastewaters are treated in a mechanical treatment plant and discharged to irrigation lines with drippers installed to disperse effluent for use by plants. There are strict controls on the layout and operation of irrigation systems, and it is recommended that you refer to the EPA Certificate of Approval prior to installing these systems.

**Installation Conditions**

**General Installation Conditions**

* All systems must comply with the [Code of practice for On-site wastewater management](https://www.epa.vic.gov.au/~/media/Publications/891%204.pdf) and the [Australian Standard for On-site domestic wastewater treatment units](https://infostore.saiglobal.com/preview/as/as1000/1500/1546.1-2008.pdf?sku=1009446).
* All irrigation pipe work and fittings must comply with Australian Standards 2698 and 3500. As part of the approval process Council will require a Certificate of Compliance for all sub-floor and internal plumbing works before issuing a Permit to Use the system.
* Inlet drains from the house to the septic tank must be laid in 20-25mm screenings or pure sand and with fall of at least 1:60.
* All absorption with irrigation areas must be located with the following minimum setback distance:
* 3m from the uphill side or 6m from the downhill side of any building or property boundary.
* 3m from the high side or 6m from the low side of any swimming pool.
* 15m from any domestic underground water tank or bore well.
* 15m from any cutting or escarpment.
* 60m from any surface waters or 100m if used for human consumption.
* Septic tanks must be located at least 2m from any buildings or property boundary.
* Garbage disposal units are not recommended and if installed will require an additional 1800L septic tank after 3200L septic tank.
* Spa baths over 200L capacity must not be connected to the primary septic tank and will require a separate treatment tank.

**Septic Tank and Absorption Trenches**

* Absorption trenches must comply with the Australian Standards and Code of Practice.
* Effluent distribution can be via 90mm slotted PVC or domed fibre glass drain (relndrain).
* Base of trenches and distribution pipes to be laid level with maximum fall of 1:300.
* All absorption trenches must be 450-600mm wide and 400-450mm deep.
* Sufficient fall must be provided between the outlet of the septic tank and the first distribution pit to prevent back flooding.
* Trenches are to be a maximum 30m in length, and there must at least 3m between trenches.
* Distribution pit must be provided at start of each trench.
* Weirs must be installed between each trench.
* Screenings must be 20-40mm blue-metal.
* A cut-off drain may be required above the disposal trenches to divert surface water and ground water.
* Trenches must be back-filled with good quality topsoil and mounded to shed surface water.
* Absorption trenches are not recommended on land with a slope greater then 1:5.
* All distribution pits and inspections openings must be kept at finish ground level.
* If an effluent pump is required it must comply with the following conditions:
* Pump well must be 600mm diameter and have a capacity of at least 200L.
* Pump must be a submersible automatic electric pump and installed according to Electricity Authority Regulations.
* Pump must have an electrically wired float switch connected to an audible alarm or warning light to alert property owner of any pump failure.

**Mechanical Treatment Plant**

* Any mechanical treatment plant must be installed according to the relevant EPA Certificate of Approval and manufacturers specifications.
* Treatment plant must be located at least 2m from any building or property boundary, and should be located so that there is no noise disturbance for neighbours caused by the unit.
* The property owner must enter into a maintenance contract with an EPA approved maintenance contractor.
* Treatment plant must be installed with a warning light audible alarm to indicate pump failure or treatment plant malfunction.

**Surface Irrigation**

* Surface irrigation is permitted only after effluent has been treated in an EPA approved treatment plant.
* Surface irrigation systems must comply with EPA Certificate of Approval CA 035/93. A copy of this certificate can be obtained from Council’s Environmental Health Team.
* The irrigation system must be permanently fixed with distribution pipes buried at a minimum depth of 100mm.
* Irrigation area must be a designated area which has been cultivated and planted with suitable vegetation, and be clearly marked with warning signs and kept separate from livestock, traffic and recreational uses.
* All pipes and fittings must comply with Australian Standard 2698 - Plastic Pipes and Fittings for Irrigation and Rural Applications.
* Storm water and surface water must be diverted away from the irrigation area, and a cut-off drain may be required.
* Effluent may be distributed via drippers or by spray irrigation.

**Installation Inspections Required for the following:**

* Inlet drains from the house to the inlet of the septic tank with all materials in place prior to backfilling.
* Absorption trenches with all materials installed prior to back-filling.
* Mechanical treatment plant when fully installed and power connected. Pumps, timer and warning light/alarm must be operational.Mechanical treatment plant when fully installed and power connected. Pumps, timer and warning light/alarm must be operational.
* Pump well and effluent pump with inlet and outlet drains completed, power connected, pump and warning light/alarm operating.
* Irrigation systems with all distribution lines and drippers/sprays installed and connected to the mechanical treatment plant.
* Please give at least 24 hours’ notice for all inspections. Inspections can be booked by calling Councils Environmental Health Team on 1300 787 624.
* Inspections are not required on internal or sub-floor plumbing, however a Certificate of Compliance will be required from the plumber.
* Additional inspections may incur a fee.

**Final Approval of Septic Tank System**

* After all of the required inspections have been conducted and approved and the Certificate of Compliance has been received from the plumber, a Permit to Use the System will be issued to the property owner. If a wastewater treatment plant is installed a copy of the commission report will be required.
* If you have any queries regarding the installation of septic tank systems please contact Cardinia Shire Council’s Environmental Health Team on 1300 787 624.

**Trees and Plants Suitable for Planting near Effluent**

**Absorption Trenches**

**The following plants are suitable for planting near absorption trenches**

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| BOTANICAL NAME | COMMON NAME |
| Acacia Cyclops | Western Coastal Wattle |
| Acacia Longifolia | Swallow Wattle |
| Acacia Retinoides | Wirilda |
| Callistemon viminalis | Weeping Bottlebrush |
| Callistemon lilacinus | Lilac Bottlebrush |
| Eucalyptus preissiana | Bell-fruit Mallee |
| Acacia howittii | Sticky Wattle |
| Callistemon citrinus | Crimson Bottlebrush |
| Melaleuca ericfolia | Swamp Paperbark |
| Melaleuca halmaturorum | Salt Paperbark |
| Tamarix juniperina | Flowering Tamarisk |

**The following plants should not be planted near absorption trenches because they can cause pipes to block**

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| BOTANICAL NAME | COMMON NAME |
| Eucalyptus Camaldulensis | River Red Gum |
| Eucalyptus citriodora | Lemon Scented Gum |
| Fraxinus raywoodi | Claret Ash |
| Eucalyptus cladocalyx | Sugar Gum |
| Populus nigra | Poplar |
| Salix Babylonica | Weeping Willow |