

PLANT TREES WITH YOUR PIPES IN MIND

Trees planted too close to wastewater or water supply pipes can cause problems.

As trees mature, so do their roots, which can enter the sewer pipes in search of the water, nutrients and oxygen they need to grow. When this happens, the roots crack and block the pipes, resulting in wastewater overflows or leakage, which is a risk to public health. There are also financial costs to consider – if the problem occurs in private pipes, the homeowner is responsible for having it fixed.

The degree of root invasion depends on a number of factors including the type and condition of the pipes, the species and age of the tree, and the soil conditions that exist in the root zone.

Preventing tree roots from entering the sewer system

The simplest way to avoid problems with roots entering sewer pipes is to ensure that trees and large shrubs are not planted over or near the pipes.

The key is to plan ahead. Before planting trees or other plants, check your property plans to find out where your sewer pipes are located. If you don't have a copy of your plans contact Auckland City Environments on 379 2020 to obtain a copy of your Property Site File. At the same time, check the location of the public sewer and other pipes running past the front of your property. Make sure you leave plenty of space between the sewer line and any trees or large shrubs. As a rule of thumb; the roots will usually extend about one and a half times the maximum spread of the adult plant's branches and up to 1.5 metres deep.

If you have limited space, you can minimise the risk of tree roots entering your wastewater pipes by choosing small plants and shrubs, or small, slow-growing tree species with less aggressive root systems. Consider replacing bigger plants before they get too large for the planting area. There are no sewer-safe trees, but by using small, slower-growing trees, you should be able to keep roots out of your sewer and other pipes for longer.

Another way to discourage root infiltration is to plant trees in large pits as far from the sewer line as possible. Loosen the soil in the pits to provide good drainage and root growth then add compost, especially to clay soils, to create an optimal root zone.

When putting in new sewer pipes, lay them on a well constructed and compacted gravel bed that is as deep as the connection to the public sewer will allow. Make sure that any excavated soil is well compacted around the pipe. It's difficult for tree roots to penetrate compacted soils and as they don't have the oxygen tree roots need to survive, trees are less likely to grow into this area.

Taking steps to prevent roots from entering your sewer pipes will save you the expense of fixing damaged pipes or clearing blockages.

Quick tips for tree planting

1. Avoid planting trees and large shrubs near sewer lines or other pipes.
2. Plant small, slow-growing trees and shrubs.
3. If you want to plant faster-growing species, plan to replace the trees every 8 - 10 years.
4. Even slow-growing trees can eventually interfere with sewer lines - consider periodically replacing any tree over a sewer line.
5. Ensure the soil around any sewer line is well compacted to discourage tree roots.
6. Replace damaged jointed clay sewer pipes with modern PVC systems - especially when repairing an existing line.

Choosing the right tree

There are a number of trees that are suitable for small gardens. This is not a comprehensive list. There may be a range of species and varieties that would better suit your property. A nursery or landscaper will be able to advise what trees and/or shrubs will be best suited to a specific site.

Recommended Trees

Botanical Name	Common Name	Botanical Name	Common Name
<i>Acer japonica</i>	Japanese Maple	<i>Kunzea ericoides</i>	Kanuka
<i>Alectryon excelsus</i>	Titoki	<i>Lagerstroemia indica</i>	Crepe Myrtle
<i>Albizia julibrissin</i>	Silk Tree	<i>Leptospermum sp.</i>	Manuka
<i>Betula sp.</i>	Birch	<i>Magnolia spp.</i>	Magnolia
<i>Callistemon citrinus</i>	Bottlebrush	<i>Malus floribunda</i>	Flowering Apple
<i>Coprosma robusta</i>	Karamu	<i>Meryta sinclairii</i>	Puka
<i>Cordyline sp.</i>	Cabbage Tree	<i>Pittosporum tenuifolium</i>	Kohuhu
<i>Citrus sp.</i>	Citrus Tree	<i>Pittosporum eugenoides</i>	Lemonwood
<i>Clianthus puniceus</i>	Kaka Beak	<i>Plagianthus betulinus</i>	Ribbonwood
<i>Griselinia sp.</i>	Griselinia	<i>Prunus sp.</i>	Flowering Cherry (excluding Taiwanese Cherry)
<i>Hebe sp.</i>	Hebe	<i>Pseudopanax crassifolius</i>	Lancewood
<i>Hoheria populnea</i>	Lacebark	<i>Pseudopanax arboreus</i>	Fivefinger
<i>Hebe spp.</i>	Hebe	<i>Sophora microphylla</i>	Kowhai
<i>Jacaranda mimosaeifolia</i>	Jacaranda		

Trees Not Recommended

Large, fast-growing aggressive-rooted trees are not recommended for near sewer pipes. Generally, these trees are large when mature, with expansive root systems that will grow into sewer line cracks, as well as causing problems with foundations, sidewalks and other infrastructure.

Botanical Name	Common Name
<i>Liquidambar</i>	Sweetgum
<i>Populus</i>	Poplar and cottonwood
<i>Quercus</i>	Oak, usually lowland varieties
<i>Salix</i>	Willow
<i>Liriodendron</i>	Tulip tree
<i>Metrosideros</i>	Pohutukawa
<i>Casurina spp</i>	Sheoak
<i>Eucalyptus</i>	Gum

Illustrations

Illustration 1: Image of a tree and its roots showing the spread of both.

Illustration 2: Image of a tree strangling a pipe and the manhole overflowing.

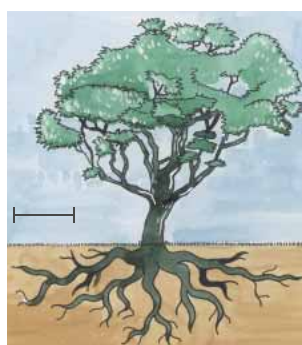


Illustration 1

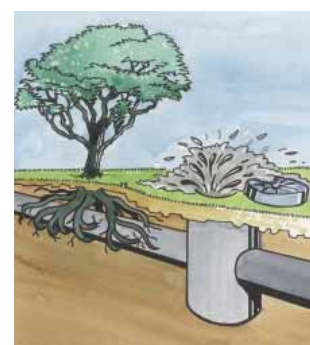


Illustration 2