Stormwater Detention

The City of Tea Tree Gully’s Development Plan requires development in certain areas to incorporate on-site stormwater detention.

The increase in residential densities and house sizes is resulting in more hard surfaces collecting stormwater, placing greater pressure on the existing drainage infrastructure.

The aim of stormwater detention is to hold (i.e. ‘detain’) within the property (i.e. ‘on-site’) stormwater collected from the roof of buildings for a sufficient period to help reduce flood risk for properties downstream.

What is a stormwater detention tank?

A stormwater detention tank ‘detains’ or slows the release of stormwater from your property through the provision of on-site storage. It is important to note that a detention tank only slows down the rate of flow from your property compared to a traditional rainwater tank which stores stormwater.

A stormwater detention tank will be empty except during periods of rainfall and for a short time after rainfall ceases.

The tanks used are standard three-module rainwater tanks which are modified to incorporate a 90mm pipe containing a leaf guard, inlet opening and outlet restriction valve.

What are the kinds of stormwater detention tanks?

The two kinds of stormwater detention tanks are described within the City of Tea Tree Gully Development Plan as being a Type 1 Stormwater Detention Tank and a Type 2 Stormwater Detention Tank.

While the function and size of each tank is similar, their detention capacities differ as a Type 1 tank comprises a capacity of 1000L, whereas a Type 2 tank has a capacity of 500L.

A larger rainwater tank can also be converted to include a detention capacity, provided the capacity is similar to the rate required for you development (i.e. 10,000L tank can comprise 1500L detention capacity).

The information provided here is a guide only.

For more information, please contact us on 08 8397 7444 or visit www.teatreegully.sa.gov.au
As a concept, the design and functionality of the tanks are as illustrated in the following diagrams:

**Type 1 Stormwater Detention Tank**

**Type 2 Stormwater Detention Tank**

In some circumstances, a new dwelling may require more than one stormwater detention tank. This can be catered for by installing two or more tanks together so they can function in a similar fashion to the diagram below.

*NOTE: Tanks may also be connected by a 90mm diameter underground “drowned” system provided inspection openings are located at all vertical and horizontal bends*
Where is stormwater detention required?

Aside from properties within the Golden Grove Residential Policy Areas, an on-site stormwater detention system is required on most individual sites within the Residential Zone.

For new dwellings, the City of Tea Tree Gully Development Plan delineates two areas, being Area 1 and Area 2, where on-site stormwater detention facilities are required to be installed. These areas are illustrated on the map below.
When is stormwater detention required?

An on-site detention system is required where the development proposed is located within either Area 1 or Area 2 and involves one of the following:

- A new dwelling, and the gross roof area exceeds 30% of the site/allotment area
- A secondary residential structure or dwelling addition with a floor area greater than 40m

New dwellings located within Area 1 of the Stormwater Areas map which result in a roof area greater than 30% of the site should be consistent with the following tables:

New dwellings located within Area 2 of the Stormwater Areas map which result in a two dimensional roof area greater than 40% of the site should be consistent with the following table:
Stormwater detention facilities are also required for the construction of secondary residential structures (i.e. outbuildings, verandahs, carports, etc) and additions to existing dwellings located within both Area 1 and Area 2.

The type of tank/s required is dependent on the size of the secondary residential structure/addition and should be consistent with the table below.

<table>
<thead>
<tr>
<th>Total two dimensional roof of structure (m²)</th>
<th>Tank capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>41-70</td>
<td>1 x Type 2</td>
</tr>
<tr>
<td>71-93</td>
<td>1 x Type 1</td>
</tr>
<tr>
<td>94-115</td>
<td>1 x Type 1 &amp; 1 x Type 2</td>
</tr>
<tr>
<td>116-136</td>
<td>2 x Type 1</td>
</tr>
<tr>
<td>137-156</td>
<td>2 x Type 1 &amp; 1 x Type 2</td>
</tr>
<tr>
<td>157-175</td>
<td>3 x Type 1</td>
</tr>
</tbody>
</table>

**Can I use a detention tank to collect and use rainwater?**

Water conservation and the use of rainwater for household needs is encouraged. However, as a detention tank will only work effectively if it is empty at the time of rainfall, they cannot be used for water collection and storage without modifications. Either an additional tank or a tank of a larger capacity will be required.

**Land division and other types of development**

Additionally, where appropriate, larger subdivisions should also provide for on-site stormwater detention in a reserve. If this achieves the necessary level of detention from the overall site, Council may not require additional detention measures when the individual allotments in the subdivision are developed.

For more information on stormwater detention systems in Commercial/Industrial Zones please contact the City of Tea Tree Gully’s Environmental Assets Department on 83977444.