Hynds Tree Pit Surround

Technical Guide SW 39

The Hynds Tree pit surround is a precast concrete surround manufactured for the purpose of providing sustainable offering that promotes the wellbeing of urban trees.

Applications

- Urban street corridor
- Stormwater infiltration
- Car Parks
- Urban streetscapes

Product Attributes

- Small footprint
- Low Installation costs
- Speedy installation
- Sustainable urban drainage

Approvals/Standards

- NZS3109
- Concrete construction

Quality/Environment/Health & Safety

ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018

HYNDS STORMWATER

The Hynds Tree Pit Surround is a precast concrete structure that forms part of a sustainable urban drainage solution promoting the wellbeing of urban trees.

Hynds Tree Pits are a versatile stormwater management device providing irrigation of street trees, stormwater quality improvement, groundwater recharge, and urban landscape benefits. Stormwater tree pit systems collect stormwater runoff from the adjacent carriageway and both impervious /pervious surfaces prior to discharge to ground and/or the conventional piped stormwater network. Tree pits also function as a pre-treatment step that reduces potential pollutants and filters out large debris.

Design Features

Hynds Tree Pits Surround is designed to provide a highly durable and rigid concrete surround that protects and ensures a high functionality of tree pit as a stormwater management system.

The advantages of Hynds Tree Pits Surround:

- Acts as a barrier beneath the soil surface, protecting the tree's roots from soil compaction caused by foot traffic and other activities that can limit root growth and impede the tree's ability to access water, nutrients, and oxygen.

Key Feature:

- A rigid structure with weir-notches to allow root expansion and improved infiltration
- Internal/External dimension as per Table 1
- Designed for 5kpa surcharge loads
- Supplied as two L-Shaped Panels bolted together on a pallet
- Designed to form part of a SUDs tree pit system.
- Optional Feature: Tree Grate
  - Protects tree roots from foot traffic and vehicles.
  - More levelled surface preventing pedestrian injuries by reducing the chance of tripping over protruding roots.
  - Enhances safety by covering open soil areas.
  - Allows water and air to reach the soil for tree health.

TABLE 1

		Length		Width				
Product Type	**Item Code**	**Internal**	**external**	**internal**	**external**	**Height** (mm)	**Wall thickness** (mm)	**Weight** (T)
Tree Pit Surround	TREEPIT	1000	1250	1000	1250	700	125	0.774
Tree Pit Surround with Grate	TREEPITLG	1250		1250		46	N/A	0.048

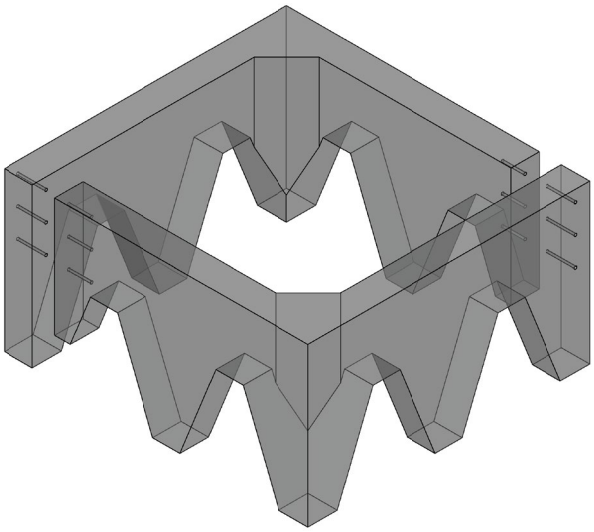
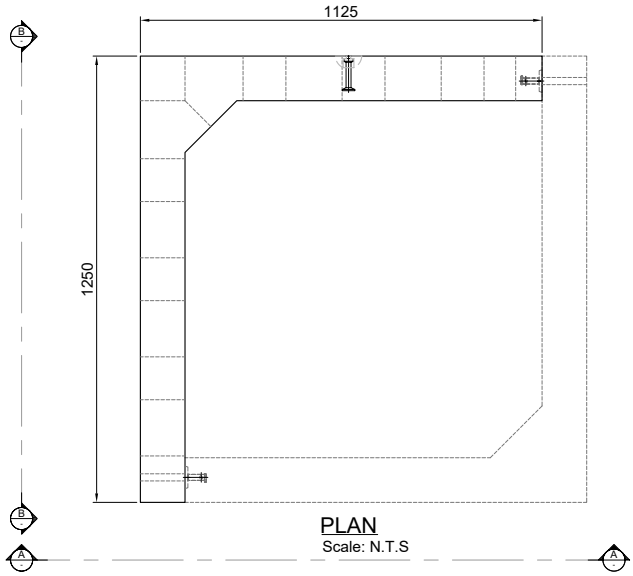
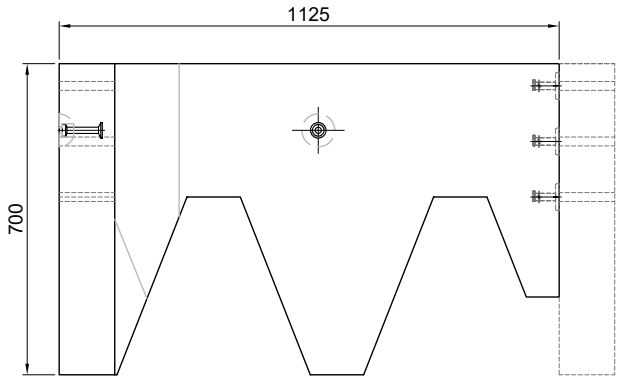
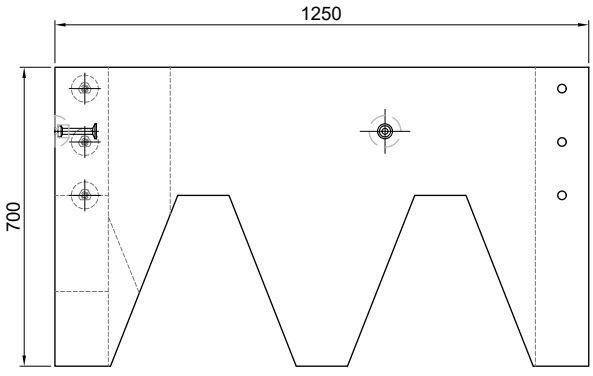


FIG. 1 3D drawing of Tree Pits Surround





A - ELEVATION
Scale: N.T.S



B - ELEVATION
Scale: N.T.S

Lifting and Handling

All Hynds Tree Pits Surround units incorporate Swiftlift lifting anchors for safe lifting and must be used with the correct lifting clutch.

Hynds Pipe Systems has designed and manufactured Hynds Tree Pits with a minimum dynamic factor of 1.2. The dynamic factor requires that all the following conditions are observed when lifting, moving or placing the units:

1. Lifting with mobile plant *(such as an excavator or similar)* where equipment is specifically exempt from the requirements of the PECPR Regulations 1999, subject to the conditions outlined in the New Zealand Gazette, No. 104, September 2015 and
2. Lifting, travelling and placing over rough or uneven ground where anchor failure is not anticipated to cause harm or injury, by adopting procedures such as:
   a. Transporting the element as close as practical to ground level (300mm recommended)
   b. Establishing and maintaining exclusion zones
   c. Transporting only precast concrete elements that are unlikely to topple if they were to hit the ground
   d. Inspecting lifting anchors both after transportation and before final lifting into place
3. Hynds uses both Reids and Ancon lifting anchors which are both designed to *(Haeussler)* specifications and as such are compatible with Reid, Deha or Ancon anchors, clutches, and recess formers of the same load range.

Refer to "Safe work with precast concrete – Handling, transportation and erection of precast concrete elements" published by Worksafe New Zealand (October 2018)

Shock loads resulting from travelling with suspended Hynds Tree Pits Surround units over rough terrain and uneven ground may exceed design, dynamic and safety factors of the lifting systems. It is essential that care is taken during lifting and transporting as additional stresses could result in anchor failure.