Hynds Tree Pit Surround

Technical Guide SW 39

Hynds Tree Pit Surrounds are a precast concrete structure to contain treatment media, shield surrounding services, and keep tree root structures protected.

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

ISO 9001:2008
Quality Management Standard

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

Stormwater tree pits are a versatile stormwater management device providing irrigation of street trees, stormwater quality improvement, groundwater recharge, volume attenuation, 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 plant.

The advantages of Hynds Tree Pits Surround:

- Having a solid concrete structure beneath the soil surface can make maintenance tasks more manageable. It provides a defined boundary for these activities and helps keep the tree pit tidy and well-maintained.
- 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 eight weir-notches to allow root expansion and improved infiltration
- Internal dimension as per Table 1
- Designed for 12kpa surcharge loads
- Supplied as two L-shaped panels that are bolted on site. Allowing for nested transport and handling of smaller individual units.
- Designed to form part of a SUDs tree pit system.

TABLE 1

Product Type	Item Code	Length (mm)	Width (mm)	Height (mm)	Wall thickness (mm)	Weight (T)
1000x1000 L-shaped surround (INTERNAL)	TBD	1000	1000	700	125	0.372

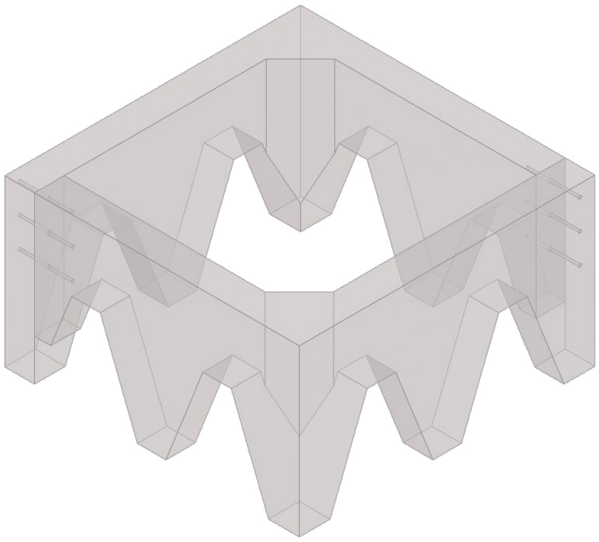

FIG. 1 3D drawing of Tree Pits Surround

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

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.

Branches Nationwide *Support Office & Technical Services 0800 93 7473*