



ZERO WASTE FOUNDATIONS

01

OUR MOST TRANSFORMATIVE INNOVATION.



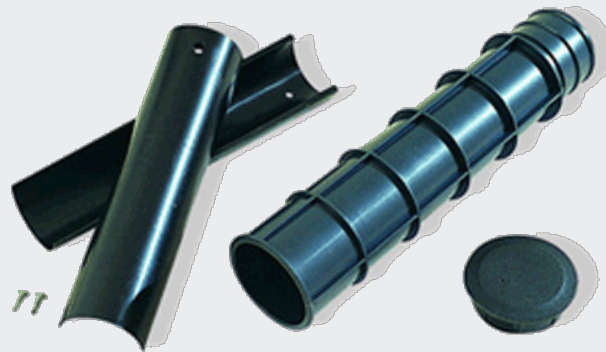
DESIGNED TO LAST A LIFETIME

ZERO WASTE Foundations do not rust, corrode or rot. They are designed to remain permanently installed and reusable for the life of the development. Proven in Australian roadside conditions for more than 30 years



IMPROVED EFFICIENCY

Items of infrastructure remain perfectly aligned safe and secure year after year. Developments remain clean and safe and infrastructure becomes dynamic quickly removed, replaced or relocated for events, disaster response, maintenance and future upgrades.



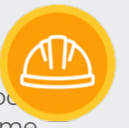
IMPROVED COST SAVINGS

No more expensive repairs. No major traffic management required. Maintenance operations quickly become financially sustainable



IMPROVED WORKPLACE SAFETY

Reduce the risk of workplace injury from "Bodily stressing from digging and heavy labour", "time working in dangerous traffic" and "damage to dangerous underground services".



WorkSafe
Western Australia

WHAT MAKES THEM SO **TRANSFORMATIVE**?

Transforming developments from continual decline to continual improvement.

Manufactured from impact-absorbing advanced polymers, ZERO WASTE Foundations do not rust, corrode or rot. **They are designed to remain permanently installed and reusable for the life of the development.**

Common complaints with conventional metal systems:

- Galvanising delays corrosion: it does not prevent impact damage, distortion or eventual rust
- galvanised components can corrode within only a few years—particularly at damaged surfaces, welds and ground level.
- rely on pins, padlocks or bolts
- locking components can shear or seize
- items can loosen, shift or become misaligned
- items can become stuck in the footing
- damaged items can create dangerous trip hazards
- Cities remain in a constant state of decline and costs continue to increase over time

IMPACT RESISTANT

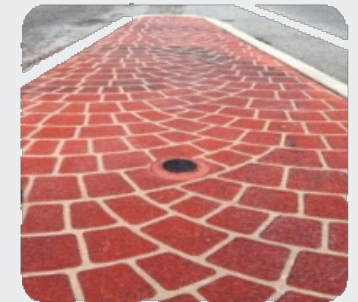
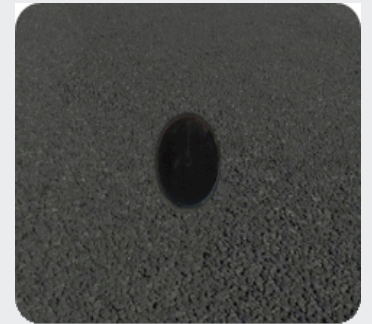
Made from impact absorbing advanced polymer and rubberised compound, the ZERO WASTE Foundations, (Ground socket and Taper) absorb impact force and recover following multiple low and high speed impacts.

NO BREAKABLE COMPONENTS

Items are secured using only friction remaining perfectly aligned and upon impact are actually forced further into the ground socket- so will not become loose and the locking device will continue working year after year. This also ensures items cannot become “stuck” in the ground socket.

UNIVERSAL

The same ground socket is used to install almost any size or weight item. The same 60 mm ZERO WASTE Foundations can be used to install large statues, posts and large diameter bollards.



Proven in Australian conditions for more than 30 years. Refer to Testing and Approvals for details

ALARMNG TRENDS

Growing costs and risks

With around 200,000 items replaced annually, the cost of repeated repairs is not the \$50 million spent on labour and materials, but the hidden cost of

- Traffic management
- Underground service strikes
- Workplace Injuries
- Workplace fatalities
- Delays and repeated call outs

Together, these hidden costs run into billions of dollars annually

National Infrastructure Burden (2024)

- Over \$1.2 billion lost annually due to utility strikes and reworks.
- Workplace injuries in roadworks costing over \$640 million per year.
- Waste management costs are rising 12% annually.
- Millions in fines and investigations related to poor WHS and EPA compliance.



Road and asset maintenance remain increasingly difficult to perform.

The **number of (often poorly mapped) underground utilities** is rapidly growing creating an ever increasing risk of serious workplace injury and fines.

In the UK, road workers are now required to undergo **self-defence training**, as abuse and assaults rise dramatically on public works crews.

In the USA, **silicosis claims are skyrocketing**, with compensation reaching into the hundreds of millions annually, forcing departments to rethink traditional concrete removal practices.

With rapid urbanisation crews face rapidly increasing WHS risks, that can be eliminated



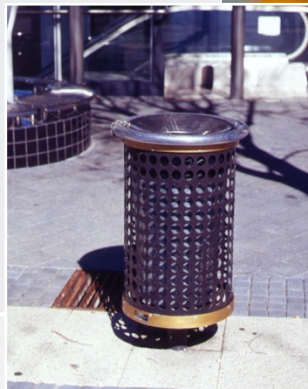
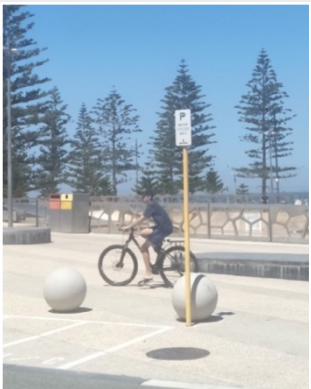
IMPROVED **DEVELOPMENTS**

Posts, barriers, grab-rails, bins, bike racks, bollards and street furniture can all be installed using 60 mm ZERO WASTE Foundations. The wider the application, the greater the benefits.

When widely applied cities become dynamic able to reconfigure infrastructure for events, disaster recovery, maintenance and upgrades.

Developments remain clean and safe

- No damaged footpaths or paving
- Items remain perfectly aligned
- Items remain secure.
- Damaged items are quickly replaced



MORE EFFICIENT **NEW WORKS**

ZERO WASTE ground sockets can be installed by simply positioning upright when pouring foundations

Instead of spending weeks digging up newly laid foundations, (requiring traffic management digging, waste, more concrete, delays and disturbance to newly laid foundations)

ZERO WASTE Foundations are installed from a standing position when the concrete foundation is poured (using the installation tool to check alignment before concrete cures). Creating a clean finish that remains in good condition for decades. It is easy to spot a ZERO WASTE development.

You can install the infrastructure for an entire development in a single day.

A self-locking taper is simply attached to the item (can be prepared in advance) and the item dropped firmly into the ground socket, automatically locking in – perfectly aligned, safe and secure.

02



MORE EFFICIENT MAINTENANCE

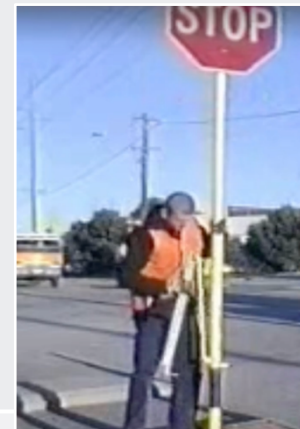
By making foundations reusable you greatly improve your ability to efficiently maintain infrastructure

03

Instead of repeatedly digging up and replacing valuable foundations, items are simply swapped out using ergonomic tools from a standing position and a new item dropped into position (automatically locking in place), reducing costs, risks and delays caused by digging and heavy labour.

Make better use of space and infrastructure:

You can remove a post and install a bollard or barrier. Install safety barriers, bins or seating for events and cap off sockets when items are not in use. You can relocate items for events or changes in seasonal requirements.



IMPROVED **WORKPLACE SAFETY**

By making foundations reusable you greatly reduce the risk of workplace injury

04

DOH&S presented ZERO WASTE Foundations with a WorkSafe Award for addressing the major causes of workplace injury

- Removing the risk of body stressing from digging and heavy labour (The major cause of workplace injury)
- Removing the risk of damage to dangerous underground services
- Substantially reducing time working in dangerous traffic (The major cause of serious injury)
- Removing risk of workers contracting silicosis from concrete dust



COST SAVINGS

Removing the need for repeated excavation is not just a maintenance improvement

05

Removing the need for repeated excavation is not just a maintenance improvement — **it is a major risk-reduction strategy**

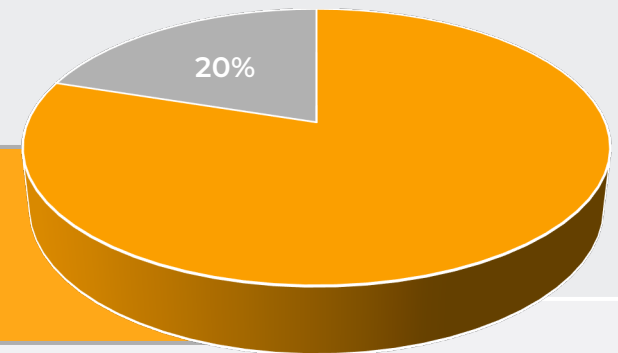
With ZERO WASTE developments foundations remain re-usable with ZERO repairs required, saving millions over the life of a development.

Damaged items are replaced quickly and efficiently using ergonomic tools and the only cost is labour.

For existing developments, the transition to financial sustainability is surprisingly fast.

Around 80% of maintenance results from just 20% of items - because they are the first replaced, within a very short time around **80% of the workload becomes simple “swap outs”** and maintenance operations quickly transition to a state of financial sustainability.

80% of the workload quickly becomes simple “swap outs”



INSTALL **BOLLARDS**

Large diameter bollards can be installed using the same 60 mm foundations.

06

Large Bollards are installed on ZERO WASTE Foundations (or surface mounted) using the Impact Recovery System, which incorporates a shock absorbing mechanism enabling bollards to absorb vehicle impact and recover, preserving the surrounding paving and concrete footings

Making bollards

- Removable
- Impact Resistant
- Recoverable from impact

Use to secure

- Steel 150 mm Bollards (165 Ø)
- Stainless Steel 168 mm Bollards (168 Ø)
- Advanced Polymer 150 mm Bollards (150 Ø)
- Stone-look Bollards
- Designer caps available
- (Almost any colour)



Used by City of Perth; City of Fremantle; Department of Transport ; Western Power, Synergy, UGL, Ventia, Genus and many more of WA's leading authorities

MEETING COMPLIANCE REQUIREMENTS

Supporting government requirements for safety, sustainability, resilience and whole-of-life value.

07

Government contracts increasingly being assessed against

- whole-of-life cost,
- safety,
- sustainability,
- risk reduction,
- maintenance efficiency and
- long-term asset performance.

ZERO WASTE Foundations help authorities meet these requirements by reducing repeated excavation, reinstatement, waste, traffic disruption and exposure to workplace injury risks — with a small, low-cost change to the way roadside assets are installed and replaced.

Helping meet key requirements for:

- whole-of-life value
- financial sustainability
- workplace safety
- reduced maintenance disruption
- lower excavation and reinstatement risk
- improved asset resilience
- reduced waste and environmental impact

Tested, approved and proven in service for more than two decades, ZERO WASTE Foundations are used by State Government departments, utilities and major local government authorities, to improve efficiency and reduce key workplace injury risks.

Recognised with a **DOH&S WorkSafe Award** for reducing key workplace injury risks.



Department of
Transport



MRWA APPROVED DEVICE

“Our selection is not based on price alone, we also took into consideration the safety and saving aspects- **ZERO WASTE Foundations** allow quick replacement of items with no further effort required to the base

providing a significant cost benefit in replacing the damaged item by re-using the existing footing) and

reduces risk of injury to employees by reducing time spent on traffic islands exposed to traffic.” MRWA

REF SPEC 601 APPROVED DEVICES



Road asset maintenance remains increasingly carbon intensive, wasteful, and difficult to perform. With rapid urbanisation crews face rapidly increasing WHS risks, that can now be eliminated. **Choose a safer future for our road workers**



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Now available through Authorised Distributors.