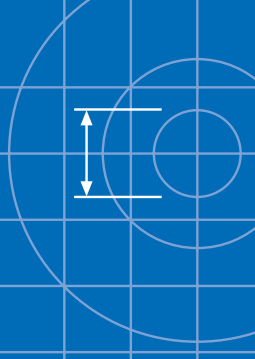


Humegard™ Gross Pollutant Trap





Humegard™

Gross Pollutant Trap (GPT)

Invented in Australia in 1995, **Humegard™** is a unique product designed to effectively capture and retain gross pollutants from stormwater runoff.

Key benefits/features

Humegard™ effectively captures and retains gross pollutants

- The unique floating boom allows **Humegard™** to continue capturing floating pollution, even during peak flows.
- The boom is designed to control the treatment flow entering the storage chamber, ensuring previously captured materials are retained.
- **Humegard™** is designed to treat up to 97% of the theoretical total annual flow, ensuring a high level of pollution removal.

Humegard™ performs in tidal zones

- Unlike other systems, **Humegard™** does not rely on a fixed weir to direct flow into the storage chamber. The floating boom remains in the optimal position to capture unsightly litter even during high tides.



Humegard™ Installation

Humegard™ has low head loss

- **Humegard™** generates a substantially lower head loss than other gross pollutant removal systems with K value of 0.2. (Minor Loss = $0.2V^2 / 2g$)
- **Humegard™** is ideal to use in retrofit applications and locations with flat grades where low head loss is critical for hydraulic efficiency.

Proven effectiveness

- **Humegard™** has been independently proven in laboratory and field tests.

Fast to install

- Precast concrete construction means total construction time can be a matter of days.

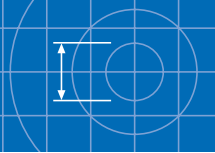
Easy, low cost maintenance

- **Humegard™** is easy to maintain using a vacuum truck.
- Designed for six monthly clean outs - based on average litter loadings.
- Durable precast and stainless steel metal components designed for long life performance.
- **Humegard™** does not rely on filtering or "straining" stormwater and therefore is blockage resistant.



Rubbish and debris captured and retained inside a Humegard™ unit





Operation

During normal flows the angled boom directs all flows into the storage/treatment chamber where the gross pollutants are separated and stored.

During peak flows, or under tidal influence, the angled boom floats and continues to direct all floating litter into the storage/treatment chamber. The regulated flow ensures previously trapped materials are retained.

Commercial and industrial areas

Humegard™ can be effectively utilised in existing or new Commercial and Industrial areas where there are high levels of visual pollution.

Humegard™ is already cleaning up existing street/strip shopping areas as well as new shopping centres and industrial developments.

Residential areas

Humegard™ is a cost-effective and aesthetically pleasing method of maintaining high visual quality and amenity in residential areas and surrounds.

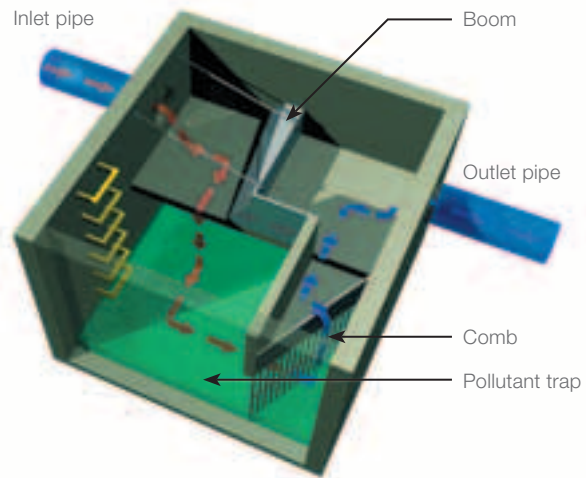
Humegard™ had been incorporated into numerous residential developments due to its combination of high performance and low maintenance and being an underground structure does not present visual intrusion.

Maintenance

Maintenance is an important and often overlooked aspect of storm water quality and can be a considerable cost when frequency is taken into account.

The maintenance of **Humegard™** is simple and cost-effective. The storage chamber is sized to minimise clean out frequency with expected maintenance required every six months. This will vary depending on the level of pollution being generated in the catchment. Humes recommends quarterly inspections initially until a site specific program can be established.

Vacuum trucks are a safe and effective method of undertaking maintenance.

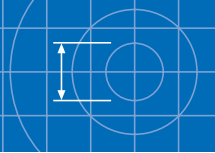


Street-side drains are common entry points of pollutants into our waterways



Humegard™ unit being emptied by a vacuum truck





Humegard™ – Gross Pollutant Trap



Manufacturing standards

Humegard™ is manufactured to precast standards NZS 3109 with surface finishes to NZS 3114.

Buyers and users of the products described in this brochure must make their own assessment of the suitability and appropriateness of the products for their particular use and the conditions in which they will be used. All queries regarding product suitability, purpose or installation should be directed to the nearest Humes Sales Centre for service and assistance. © Fletcher Concrete and Infrastructure Limited 2006. Printed 10/06.

