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Our Vision

“To be a leading provider of quality services that sustain and enhance the environment in which we live and the communities in which we operate, by restoring our waterways as nature intended.”

1.0 About Urban Asset Solutions Pty Ltd

Urban Asset Solutions Pty Ltd is a progressive company specialising in the design, construction, management and maintenance of stormwater treatment and harvesting infrastructure.

Our family, products and services includes:

Urban Asset Solutions Pty Ltd the parent company, specialise in design, construction and maintenance of bespoke stormwater treatment systems.

Design, manufacture and installation of the widely recognised and innovative Ecosol stormwater treatment and harvesting products, for the civil drainage and construction industry.

Ecological Filtrations Systems Sdn Bhd, our sister company, specialises in the provision of stormwater treatment solutions throughout South East Asia.

Collectively we aim to deliver exceptional and sustainable outcomes for our clients.

Our Values

• Our team is passionately committed to customer service, as well as environmental and social responsibility.

• We take our duty of care for people seriously and uphold our commitment to safety and risk management.

• We strive to continually exceed our client’s expectations and seek to foster a collaborative environment, working together to enhance project outcomes for all parties.
2.0 Who We Are

Our team is empowered to share knowledge, collaborate, and create lasting community benefit in partnership with our clients. We will work with you to determine the most appropriate Water Sensitive Urban Design (WSUD) solution, to achieve an optimal and sustainable outcome for all project stakeholders.

At Urban Asset Solutions Pty Ltd we acknowledge that site constraints, along with increasingly onerous Environmental Best Management Practices, often require customised solutions to meet your site flood mitigation, water quality and stormwater harvesting objectives. Our team has the expertise to develop in close consultation with you the right solutions for your project.

Turnkey solutions provider – At Urban Asset Solutions Pty Ltd we can provide a comprehensive turnkey service that includes:

- MUSIC Modelling
- Design
- Engineering
- Manufacture
- Installation
- Commissioning
- Operation
- Maintenance

Independently Tested & Verified Product Solutions

Our products are independently tested in both laboratory and field environments and our systems are designed to meet stringent Australian Standards.

In developing the range of innovative Ecosol stormwater treatment systems, we have given careful consideration to durability, longevity, cost and maintainability.

“Urban Asset Solutions is a leading provider of effective, cost efficient stormwater treatment systems and ongoing asset maintenance services. We are passionate about stormwater and reducing the impact stormwater pollution has on our environment.”
2.0 Who We Are (continued)

At Urban Asset Solutions Pty Ltd we are committed to investing in ongoing research and development, to ensure our products continue to meet industry expectations and standards that provide exceptional performance in the reduction of stormwater pollution within our waterways for the benefit of future generations.

Planned & Reactive Maintenance Service Provider

At Urban Asset Solutions Pty Ltd we acknowledge that stormwater asset maintenance is Complex. With the ever increasing renewal gap, the potential consequences of not effectively maintaining your stormwater drainage infrastructure in a planned and timely manner may accelerate deterioration of the asset, ultimately creating a repair or reinstatement expense.

Our civil construction and landscaping maintenance teams have the experience to rectify vegetated WSUD assets, refurbish dilapidated structural treatment devices and to comprehensively clean most proprietary Stormwater Quality Improvement Devices (SQIDS) using modern well maintained plant and equipment.

Our Team

At Urban Asset Solutions Pty Ltd we are dedicated to improving the quality of stormwater draining to our waterways. Our passionate team has many years of industry experience and welcomes an opportunity to work with you to develop the most appropriate solution for your next project.
2.0 Who We Are (continued)

Our Certifications

Quality Management Systems: ISO 9001
OHS Management Systems: AS/NZS 4801 & OHSAS 18001
Environmental Management System: ISO 14001

Local Government Approved Supplier

Urban Asset Solutions Pty Ltd is also pleased to be an approved contractor and supplier with:

WALGA – Local Government in Western Australia, Preferred Supplier (Contract No. CO17/18) for the provision of Road Building Materials and Related Services within the following categories – Drainage Pipe Supply and Drainage Services.

LOCAL BUY – the Government Association of Queensland (LGAO) Contract Number BUS256-0416 approved supplier for the provision of Pipes, Pipe Relining, Pumps, Water Meters, Pre-cast Concrete and Fibre Reinforced Products.
2.0 Who We Are (continued)

Our Licenses

Urban Asset Solutions Pty Ltd is a licenced building work contractor (BLD 292854) to the civil construction and structural landscaping industry, specialising in environmental management services.

As a minimum, all Urban Asset Solutions site staff are trained and accredited to:

- Work safely in the construction industry (White Card)
- Work Safely at Heights
- Certified Operators in Confined Spaces
- High Risk Licenced
- Provide Basic Emergency Life Support
- Provide First Aid

Professional Membership

Urban Asset Solutions Pty Ltd is proud to be a member, often a founding member, of the following associations and institutions committed to improved wastewater management practices in Australia and internationally.

Contact Us

Telephone: 1300 706 624
Fax: 1300 706 634
Email: info@urbanassetsolutions.com.au
Website: www.urbanassetsolutions.com.au
Address: PO Box 64 Pooraka SA 5095
3.0 What We Do

**Urban Asset Solutions Pty Ltd** specialises in the provision of site specific, high-performance, sustainable stormwater treatment and harvesting solutions, including asset maintenance services to improve the quality of water draining from urban developments to our natural waterways.

We do this by providing a turnkey service to our clients that includes proven, customisable solutions to achieve current Best Practice Environmental Management Guidelines. Backed by experienced staff and extensive stormwater industry know-how we are able to provide a range of stormwater management solutions to support you in achieving your site flood mitigation and Water Quality Objectives.

**We specialise in the provision of:**

- The innovative Ecosol stormwater treatment products
- Modern Water Sensitive Urban Design Solutions (WSUDs)
- Cost effective, efficient Stormwater treatment and harvesting solutions (both structural and vegetated)
- Comprehensive stormwater, monitoring, auditing, cleaning and maintenance services
- Design, construction and commissioning services for bespoke stormwater treatment solutions
- Vegetated WSUD programed maintenance and rectification services to ensure ongoing performance of your water quality assets

**Our team consists of:**

- Civil, structural and drainage engineers, including drafting personnel
- Pre-cast concrete and civil construction experts
- Industrial netting and sewing tradespersons
- Stainless steel fabricators
- Stormwater maintenance field personnel
- Landscapers, consisting of land management conservationists, bush regenerators and horticulturalists

“*We are able to provide a holistic approach, working in close consultation with our clients to find the best and most cost efficient solution for their stormwater management project.*”
4.0 Stormwater Treatment and Harvesting Product Solutions

Stormwater Treatment Solutions – Objectives

Water Sensitive Urban Design (WSUD) objectives and principles are now applied to most urban developments with the aim of minimising adverse impacts that a development may have on the natural ecosystem.

The objective of stormwater treatment is to achieve a real, visible and sustainable improvement in water quality. Treatment measures, such as gross pollutant traps, litter baskets, sediment basins, grass swales, infiltration and biofiltration systems, and sand filters reduce the level and concentration of a range of pollutants, thereby enhancing water quality.

Best Management Practices for Stormwater Treatment

Best Management Practices require planners and developers to apply a fit for purpose treatment train approach to addressing stormwater composition, treatment because no single measure can remove all pollutants typically present in a catchment. Adopting such an approach is the key to achieving water quality objectives (WQOs). The designed interaction of the different measures will vary depending on site characteristics, the catchment and the needs of the receiving ecosystem. It is essential that WQOs are established as part of the conceptual design process for a development.

Stormwater Primary treatment solutions are an integral part of the stormwater treatment train. Primary treatment devices such as Gross Pollutant Traps also commonly known as SQIDs (Stormwater Quality Improvement Devices), including at-source litter baskets, trash racks, floating booms and net-tech devices all provide essential pre-screening of stormwater runoff, capturing and retaining gross litter, vegetation and coarse sedimentation.
4.0 Stormwater Treatment Product Solutions

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Best management practices for stormwater treatment

Best Management Practices require planners and developers to apply a fit-for-purpose treatment-train approach to stormwater treatment because no one measure can remove all of the pollutants typically present in a catchment. Adopting such an approach is the key to achieving water quality objectives (WQOs), although the designed interaction of the different measures will vary depending on site characteristics, the catchment, and the needs of the receiving ecosystem. It is essential that WQOs are established as part of the conceptual design process for a development.

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5.0 Stormwater Primary Treatment Solutions
5.1 Ecosol Drop Trap

At-Source (Top Entry or In-Line) Primary Treatment Solution

The Ecosol Drop Trap is designed to remove and retain solid pollutants conveyed in stormwater runoff from impervious surfaces. The top entry filtration system consists of a pre-cast concrete pit containing a capture basket and overflow by-pass flaps. The unit is typically installed as a top entry system however can also be adapted to either in-line, or at the end of the stormwater line, where there is a drop between the upstream invert and downstream obvert levels of at least 450mm, preferably more.

This drop is needed so that the structure can house an adequately sized basket. Solid pollutants conveyed in flows from the upstream pipe or overland surface flows are filtered through the basket positioned directly below the upstream pipe invert or grated access cover at surface level. The filtered stormwater then passes through the unit to the downstream outlet pipe and into the drainage network without any head/hydraulic loss through the unit. As the basket approaches 90% full, the by-pass flaps begin to open in response to the incoming flow. Once the basket is 100% full the pressure of the incoming flow forces open the by-pass flaps, allowing the excess flow, to enter the drainage system through the by-pass openings. This effectively eliminates the likelihood of flooding, a common fault with other systems. Even when in by-pass, there is minimal resuspension of settled pollutants.

When the flow ceases, the flaps return to their normal position (see below for a graphical representation of the unit in operation). The Ecosol Drop Trap separates, collects, and retains more than 98% of solid pollutants greater than 3mm in size and is ordinarily not installed on drainage lines larger than 600mm in diameter.
5.2 Ecosol Gross Pollutant Trap (GPT)

In-Line or Off-Line Primary Treatment Solution

The Ecosol GPT (in-line end-of-line stormwater treatment solution) is a non-blocking, wet sump, tangential filtration system that has been specifically designed to filter pollutants conveyed in stormwater conduits by capturing and retaining all contaminants larger than 3mm up to a designed treatable flow rate (TFR). It can play an integral role in reducing pollution in urbanised catchments and help reduce the footprint of a total stormwater treatment train by providing essential pre-screening for downstream secondary and tertiary treatment systems.

Developed in 1996 and tested by the University of South Australia and also EngTest, the commercial consulting division of the Adelaide University, it remains today one of the most widely recognised and used stormwater primary treatment systems. Today, as part of our continual product improvement program, the modern Ecosol GPT is designed to provide high pollutant retention rates with little hydraulic impact on the drainage infrastructure.

Easily installed, the pre-cast, modular GPTs can be fitted to conduits of almost any size and shape, either within the drainage network or off-line adjacent to creeks or in open channels. Its range of applications include industrial and commercial sites, such as car parks, shopping centers, and wash-down bays, residential developments, airports, freeways and as essential pre-screening for downstream secondary and tertiary treatment systems such as bio-retention or media filtration systems.
5.3 Ecosol Litter Basket

Litter Basket – At Source Kerb Inlet Primary Treatment Solution

The Ecosol Litter Basket captures and retains a range of gross pollutants at entry points to the drainage network. Easily installed into most types of side entry pits, also known as gully pits or catch pits, it retains more than 97% of pollutants greater than 2000µm and in the field it has been found to collect much smaller particles, including fine sediments.

For many years the Ecosol Litter Basket has been seen as the industry standard for at-source filtration with its effectiveness proven over time both in the field and under strict laboratory conditions. Consisting of a capture basket, reusable liner, and overflow bypass flap(s) the Ecosol Litter Basket is fitted below the invert of the gutter inside the drainage pit and, importantly, does not obstruct flow into the outlet pipe. The liner is easily removed and emptied during maintenance and comes in a range of filtration fabric sizes from 100µm to 3000µm, depending on the site requirements.

The Ecosol Litter Basket is designed to meet strict engineering guidelines and manufacturers guarantees it is one of the most durable at-source treatment systems available. The stainless steel components have a life expectancy of 15 years while the filtration bag has a life expectancy of 5 years, providing appropriate maintenance practices are employed.
5.4 Ecosol Net Guard

In-Line (Up To 1650mm Diameter RCP) Primary Treatment Solution

The Ecosol Net Guard provides effective primary treatment of stormwater flows thereby significantly enhancing the operational life of downstream secondary and tertiary treatment systems.

The system has been designed to provide a robust and durable cost effective in-line primary treatment system that captures and retains solid pollutants conveyed in stormwater conduits.

In developing this innovative primary stormwater treatment system, careful consideration has been given to durability longevity, cost, and maintainability. Key commercial technical features include:

- Low visual impact and energy footprint
- Designed hydraulics with proven performance and longevity
- Scalable, adaptable design
- Cost effective maintenance regime.

The Ecosol Net Guard is a compact primary filtration system that removes pollutants from stormwater flows. It consists of a pre-cast concrete pit that houses a strong stainless-steel frame with a removable heavy-duty UV-stabilised polyethylene filtration net for gross pollutant capture and retention. The filtration net is similar to that used in the highly successful and widely sold Ecosol Net Tech.

Once installed, under any flow, the unit will start capturing and retaining pollutants. The filtered stormwater passes through the net and downstream to the receiving waterway or to a secondary treatment system. It will continue to capture and retain gross pollutants until the filtration net reaches its designed holding capacity, or in the event of a major rain event, when excess flows will simply over top the system, as designed.

The unit requires little or no structural change to the existing stormwater system, thereby reducing capital costs and minimising disruption to the general public during installation. One of the unit’s key advantages is its ability to operate effectively in both partially submerged and tidal environments where it will continue to operate effectively without any remobilisation of pollutants larger than the net apertures.
5.5 Ecosol Net Tech

End-Of-Line (Up To 900mm Diameter RCP) Primary Treatment Solution

The Ecosol Net Tech is a robust and modern filtration system for use where there are cost or space constraints, or specialised cleaning equipment is not available. The Net Tech system is designed to specifically capture and retain large gross pollutants conveyed in stormwater runoff, however, in practice, it has been found to collect much smaller particles, including fine sediments.

Easily installed into most drainage networks, the unit’s simple design has a unique net release mechanism that eliminates any adverse hydraulic impact traditionally encountered with direct screening trash racks. It can be installed not only end-off-line at almost any pipe outlet, but also in-line where concrete structures such as manholes and junction boxes can house the unit. It is also a cost effective and efficient pre-screening system for vegetated swales, wetlands and on site detention systems.

The Ecosol Net Tech consists of a stainless-steel sleeve extension (that is fitted into existing, or new, outlets), a removable polyethylene net, which, when full of pollutants, disengages during a rain event, effectively eliminating the risk of flooding during peak flow storm events. The unit is easily cleaned using a small crane truck for lifting the net and emptying the pollutants.
5.6 Ecosol Silt Arrestor

In-Line Primary Treatment Solution

The range of Ecosol Silt Arrestors provide a purpose designed and built underground storage pit where water that is contaminated with suspended sediment is treated.

Suspended solids (silt and sediment) from surface run-off is conveyed to the Ecosol Silt Arrestor, typically by a conventional drainage pipe. Once trapped within the unit, internal baffles slow the flow velocities thereby providing gravitational separation of fine particles entrained within the stormwater flows. Filtered stormwater is then discharged, via the outlet pipe back into the drainage network with the settled solids retained at the base of the Ecosol Silt Arrestor.

The grading of suspended sediments entering the Silt Arrestor is important in determining settling velocities and to assist you in determining the appropriately sized Silt Arrestor for your project. The estimated standard settling time of particles ranging from 0.07 – 0.20mm is approximately 5 – 10 minutes. As a guide, traditionally larger units are typically installed in industrial environments whereas smaller 1,600 and 4,000 Ecosol Silt Arrestors would normally be used in small commercial applications such as wash down bays with significantly smaller catchment areas.
5.7 Ecosol Soakwell Litter Trap

In-Line Primary Treatment Solution

Increasingly stringent environmental best management practice requires planners and developers to apply a fit for purpose treatment train approach to stormwater treatment, to achieve today’s water quality objectives (WQOs).

Soakwells are designed to provide on site detention and infiltration of stormwater run-off. The implementation of soakwells enables stormwater runoff from impervious surfaces to infiltrate back into the water table as close as possible to its predevelopment hydrology and is an integral part of today’s urban stormwater best-management practice.

The captured stormwater is slowly released into the ground via weep holes or an open base within the soakwell system. They are generally available as circular steel reinforced pre-cast concrete pits ranging from 600mm to 1800mm in diameter with depths below surface level of 600mm – 1800mm and with storage volumes up to 4,580L. Generally they are designed to service an impervious catchment area of approximately 375m².

Essential to maintaining the infiltration properties of your soakwell is regular preventative maintenance and pre-treatment of the stormwater flows. Urban Asset Solutions Pty Ltd a specialist stormwater filtration provider has designed a purpose, built Soakwell Litter Trap for pre-screening of stormwater flows entering your soakwell. The installation of this pre-treatment litter trap within the main soakwell structure significantly enhances the life and infiltration properties of your soakwell.

The Ecosol Soakwell Litter Trap is able to be custom built to suit soakwells of most diameters and can be easily retrofitted. It is designed to capture and retain all pollutants conveyed in stormwater runoff larger than 3mm in diameter. The stainless steel filtration basket is a robust design that will increase the life of the infiltration layer by preventing larger gross litter and vegetation from blinding the porous base of the soakwell.
5.8 Ecosol Storm Pit Class 1

At-Source Grated Inlet or In-Line Primary Treatment Solution

This compact at-source or in-line system is designed specifically to provide primary treatment of stormwater flows in one fully self-contained underground device. It consists of a primary treatment filtration basket for retention of sedimentation larger than 200 micron, a series of baffles and detention bay for retention-free floating hydrocarbons and gravitational separation of finer sedimentation.

It is designed to treat 100% of incoming flows up to its designed treatable flow rate, capturing and retaining pollutants conveyed from impervious areas in a rain event, either at point of source or in-line.

Compact, and flexible and installed underground the Ecosol Storm Pit (Class 1) system is designed for use in hardstand and trafficable car parks in typical, medium density housing estates and small commercial developments up 500m². It suits pipe sizes from 100mm to 225mm in diameter.
5.9 Ecosol (Modular) Trash Rack

In-Line/End-of-Line Primary Treatment Solution

Ecosol has also developed a standard modular trash rack system suitable for most stormwater outlet applications. The Ecosol Trash Rack is a robust and modern primary treatment filtration system for use where there are cost or space constraints, or specialised cleaning equipment is not available. The unit captures and retains more than 93% of solid pollutants larger than 50mm, although, in practice, it has been found to collect much smaller particles, including fine sediments.

Easily installed, the Ecosol Trash Rack's has a simple design which overcomes any adverse hydraulic impact traditionally encountered with generic, direct screening, trash racks that often block in first flush flows. By incorporating filtration nets into the design, its operating life is significantly improved as this allows for an increased screening surface area and a larger pollutant holding capacity.

Not only can it be installed end-of-line at almost any pipe outlet discharging to beaches, rivers, and creeks but also in-line within open channels.

The Ecosol Trash Rack consists of a structurally engineered stainless steel frame with support legs and a removable heavy duty UV stabilised polyethylene filtration net that can be easily lifted out for cleaning and maintenance using a small crane truck. This overcomes the problem usually encountered with traditional, fixed direct screen designs, which are often difficult and expensive to clean.

The system has been designed to provide a robust and durable cost effective primary treatment system that captures and retains solid pollutants conveyed in stormwater conduits.
6.0 Stormwater Secondary Treatment Solutions
6.1 Ecosol Storm Pit Class 2

At-Source Grated Inlet or In-Line Secondary Treatment Solution

The Ecosol Storm Pit (Class 2) is a unique compact at-source or in-line secondary stormwater filtration system designed to carry out multiple treatment processes on stormwater runoff within the one compact underground device. In particular it is designed to remove, at pre-determined treatable flows, particulate, dissolved and in some cases colloidal bound contaminants such as:

- Suspended solids
- Heavy metals
- Oil & grease
- Hydrocarbons
- Nitrogen and
- Phosphorous.

The system is ideally suited for smaller catchments such as commercial car park applications with inlet flows ranging from 10 – 110L/s. It provides a compact, cost efficient treatment solution specifically targeting suspended solids, heavy metals, total phosphorous and nitrogen including free floating oils and grease.

Housed in a pre-cast concrete pit, the unit consists of a primary treatment inlet litter basket designed to capture and retain all particles larger than 200 micron and then incorporates a series of internal baffles for retention of hydrocarbons in a spill situation and the retention of particles (> 93 micron). It also includes a unique patented multi barrier StormDMT filter media for secondary treatment.
6.2 Ecosol Sand Filter

Off-Line Secondary Treatment Solution

Sand Filters are typically used in water-sensitive urban design (WSUD) as a component of a treatment train to remove pollution conveyed in stormwater runoff, before discharge to receiving waterways or to underground storage for collection and reuse.

Sand filters operate in a similar manner to Bioretention systems, with treated stormwater percolating downwards through a filter media and then being intercepted by perforated pipes located at the base of the media for conveyance downstream. Prior to entering the filter media (typically sand), flows must be subjected to pre-treatment to remove litter, debris and coarse sediment. This is typically achieved via an inlet chamber fitted with a primary treatment litter basket as part of the system.

Although not commonly used today, they are still appropriate where site conditions, such as space limitations, or drainage grades, limit the use of bioretention systems.

The range of Ecosol Sand Filters is able to be custom built to suit most applications and can be easily retrofitted into existing drainage networks. Ecosol Sand Filters are designed to remove and retain gross pollutants, sediment, free oils (hydrocarbons) and other attached particulate pollutants such as Nitrogen, Phosphorous and heavy metals present in stormwater runoff. The system is unique as it provides both primary and secondary treatment of stormwater flows within the one device.

The Ecosol Sand Filter is a multi-chamber engineered pre-cast concrete system consisting of:

- An inlet chamber with removable filtration basket designed for pre-treatment (primary treatment) of stormwater flows; pre-treatment of stormwater entering an infiltration system is critical as it minimises the potential for clogging of the infiltration media
- A fore-bay chamber to reduce flow velocities entering the systems
- A secondary filtration chamber consisting of a sand filtration media with ponding for removal of finer particulate pollutants conveyed in stormwater flows (secondary filtration)
- An overflow chamber ensuring adequate discharge at peak flow eliminating the potential for scouring of the secondary infiltration media.

Units in the Ecosol Sand Filter series are predominately installed as off-line systems.
7.0 Stormwater Tertiary Treatment Solutions
7.1 Ecosol Tree Pit

**Streetscape Stormwater Treatment System**

The Ecosol Tree Pit is a modern, fully self-contained stormwater treatment system that provides tertiary treatment of stormwater flows in one compact device at a streetscape level.

Ecosol Tree Pits are mini rain gardens (also known as Tree Filter Boxes or Street Tree Wells) that comprise of a tree planted within an underground pre-cast concrete pit, generally consisting of a combination of media layers which allow stormwater to slowly infiltrate from the surface down to under drain pipes where the filtrate is then conveyed to a traditional drainage system.

Today, Tree Pits are an integral part of a total treatment train approach and are incorporated into most street scape designs. Applied at a street scale to capture and treat stormwater runoff close to source, they not only provide a compact, efficient stormwater treatment solution they also help to enhance streetscape aesthetics.

The Ecosol Tree Pit has been designed to provide a robust and durable cost effective, aesthetically attractive kerbside treatment system. The system is filled with porous filter media and planted with vegetation to remove pollutants from stormwater runoff using natural and physical processes.

In developing this innovative stormwater treatment system careful consideration has been given to durability, longevity, cost and maintainability. Key commercial technical features include:

- Low visual impact and energy footprint
- Designed hydraulics with proven performance and longevity
- Scalable, adaptable design
- Cost effective maintenance regime.

At Urban Asset Solutions Pty Ltd we can site measure, fabricate, install and maintain your Tree Pit making the entire process seamless.
Kerbside Stormwater Treatment System

Biofilters are an integral part of a total treatment train approach and are able to be applied at street scale to capture and treat stormwater runoff close to its source.

Stormwater Biofiltration Systems (also commonly known as biofilters, bioretention systems and rain-gardens) are configured as vegetated filtration systems with a collection pit and are designed to remove fine suspended solids and dissolved pollutants. They operate by filtering stormwater runoff through densely planted vegetation and then percolating the runoff through a prescribed porous filter media. Extended detention within the system acts to slow incoming stormwater, allowing suspended particles to settle. The stormwater then seeps through the underlying sand, soil or gravel filter media, where physical, chemical and biological processes contribute to pollutant removal.

The Ecosol Bio Filter is a modern, modular fully self-contained, linear stormwater treatment system that provides effective primary, secondary and tertiary treatment of stormwater flows in one compact device.

The system has been designed to provide a robust and durable cost effective aesthetically attractive kerb-side treatment system. In developing this innovative stormwater treatment system careful consideration has been given to durability, longevity, cost, and maintainability.
8.0 Rainwater Harvesting Solutions
8.1 Ecosol Rain Tank

Rainwater Harvesting and Re-Use

The Ecosol Rain Tank is designed to store non-potable rainwater collected from impervious surfaces in commercial, industrial, and residential developments. This unit is designed primarily for use on high density sites where re-use of the rainwater is both viable and desirable. By reducing our dependence on mains water we can cut water-usage costs over time and provide a positive return on the initial capital investment.

The range of Ecosol Rain Tanks is designed to provide a robust and durable, cost effective, underground rainwater harvesting and re-use system.

In developing this innovative system careful consideration has been given to durability, longevity, cost, and maintainability. Key commercial technical features include:

• Low visual impact and energy footprint
• Designed hydraulics with proven performance and longevity
• Scalable, adaptable design
• Cost effective maintenance regime.

Designed to filter and store rainfall ready for re-use, the system is supplied complete and fully contained ready to reticulate the rainwater to gardens and parks.

The unit is installed underground, providing environmentally friendly and safe rainwater storage, which helps reduce the risk of contamination from bacteria and algae growth. The Ecosol Rain Tank consists of a pre-cast concrete pit containing a secondary filter that removes fine sediment from flows. Primary filtration usually takes place upstream of the unit, preferably using an Ecosol primary or secondary treatment device, thereby helping prevent pollutants usually conveyed in rainwater, from entering the Ecosol Rain Tank.

The Ecosol Rain Tank has a controlled inlet device to reduce remobilisation of settled solids and to manage flow velocities and, as with all Ecosol units, it has an overflow mechanism that enables the unit to discharge excess flows. A back-flow valve prevents the rainwater from travelling back into the unit. The unit comes with a pump that has a floating intake valve and a controller, that are used to reticulate the stored water to its destination at predetermined volumes. Trafficable, solid-top sealed access covers provide easy access to the unit for inspection and maintenance.

The unit comes in a range of sizes (3,000 to 25,000 Litres) with all internal pipes and fittings included to suit site-specifics. Together with an upstream primary filtration system the Ecosol Rain Tank provides an environmentally friendly, cost-effective and efficient rainwater re-use solution.