

PROJECT REPORT

RSF 4000 Solid Pollutant Filter, Design, Installation & Monitoring - Shirley Strickland Drive

Homebush Bay, NSW Bicentennial Park Trust - 28 February 2001



.... to be recognised as an innovative, dynamic contributor to a better environment and a world leader in the removal of waste from stormwater, sewage, and other fluids with a range of technologies for use in the community, home, and industry



NATURAL ECOLOGICAL SOLUTIONS

PROJECT DETAILS	
Client:	Bicentennial Park Trust
Client Contact:	Mr Grant Sutcliffe - Field Services Manager
Project Name:	Bicentennial Park Trust, Homebush Bay
Background Details:	<p>In March 1999 the Bicentennial Park Trust engaged consultants Gutteridge Haskins and Davey (GHD) to prepare and implement a Strategic Stormwater Management Plan and in particular to recommend an appropriate stormwater pollution control device for Boundary Creek.</p> <p>The aim was to address the problem of stormwater pollution emanating from the Boundary Creek Catchment and discharging into Homebush Bay in close proximity to the sensitive Sydney 2000 Olympic site.</p> <p>GHD nominated the Ecosol RSF 4000 Solid Pollutant Filter as the most appropriate device for the site and as part of the Stage One Grant under the Environment Protection Authority's Stormwater Trust Program, the Bicentennial Park Trust obtained funding for the design of the recommended Ecosol RSF 4000 Solid Pollutant Filter for Boundary Creek.</p>
Project Work:	<p>The supply, installation, monitoring, and maintenance of one Ecosol RSF 4000 Solid Pollutant Filter at Shirley Strickland Drive, Homebush Bay, Sydney, NSW.</p> <p>Associated site works Included:</p> <ul style="list-style-type: none"> • The design and construction of a concrete access drive way and hardstand; • Installation of a concrete diversion weir; • Removal of an existing trash rack; • Pipework and rockwork/scour protection to the unit inlet and outlet; • Installation of safety handrailing; • Rockwork and scour protection to the existing creek adjacent to the unit; and • Turfing and landscaping of all disturbed areas.
Practical Completion:	24 September 1999
Commissioning Date:	31 August 1999

Summary

In the first 16 months since commissioning the unit was cleaned four times and collected more than 48 tonnes¹. Pollutants captured comprised mainly of vegetation and sediment. The unit has performed to its specifications and has contributed significantly to the restoration of Boundary Creek prior to the Olympics.

Minor remedial work has been carried out during the 16 month period.

¹ In the ten months from the date of this report to 31 December 2001 the unit has collected a further 24 tonnes making a cumulative total of 72 tonnes since commissioning

Gross Pollutant Trap Design Specification	
Treatable Flow Rate:	2.8m ³ /s
Design Flow Capacity (By-pass) 1:1 ARI:	13.5m ³ /s
Collection Capacity:	36.5m ³
Gross Pollution Capture Efficiency at Designed Treatable Flow Rate:	95% > 3mm
Silt and Sediment Capture Efficiency at Designed Treatable Flow Rate:	86% > 0.25mm
Free Oil Capture Efficiency in Oil Spills:	97%
Method for Cleaning:	Eductor

Cleaning and Maintenance

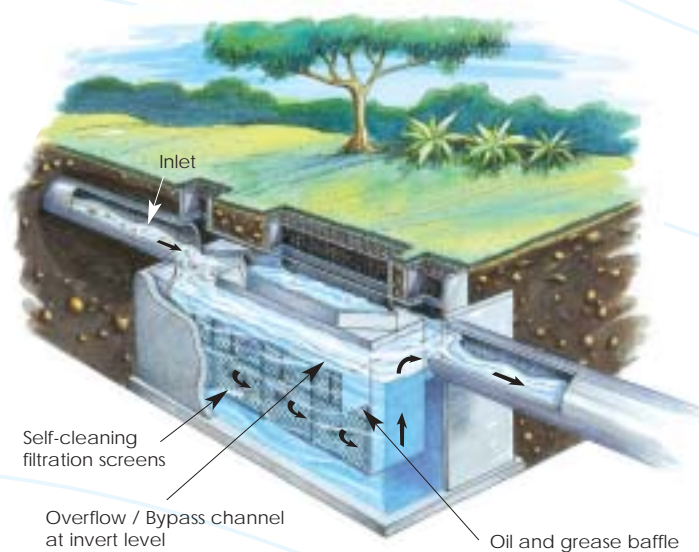
As part of its ongoing service to the Bicentennial Park Trust, Ecosol provided a comprehensive monitoring, cleaning, and maintenance service.

This service included monthly inspections of the unit and quarterly cleans using an eductor truck for dewatering and removal of all captured pollutants. On completion of each clean a report is provided to the client detailing the volume and type of pollutants removed.

Also included in this service is any remedial work should it be required.



Ecosol provides a comprehensive monitoring, cleaning, and maintenance service



The Ecosol **RSF 4000** Solid Pollutant Filter

Cleaning Dates and Quantities	
Clean Number	1
Date of Clean	21 October 1999
Composition of Pollutants Captured (%)	
Sand/soil	60 %
Vegetation	30 %
Gross Pollutants (paper/plastic etc)	9 %
Free Oils and Grease	1 %
Total volume of pollutants removed	9.5 tonnes

Clean Number	2
Date of Clean	15 March 2000
Composition of Pollutants Captured (%)	
Sand/soil	9%
Vegetation	70%
Gross Pollutants (paper/plastic etc)	20%
Free Oils and Grease	1%
Total volume of pollutants removed	11.5 tonnes

Clean Number	3
Date of Clean	26 July 2000
Composition of Pollutants Captured (%)	
Sand/soil	60 %
Vegetation	30 %
Gross Pollutants (paper/plastic etc)	9 %
Free Oils and Grease	1 %
Total volume of pollutants removed	15.5 tonnes

Clean Number	4
Date of Clean	12 January 2001
Composition of Pollutants Captured (%)	
Sand/soil	19 %
Vegetation	65 %
Gross Pollutants (paper/plastic etc)	15 %
Free Oils and Grease	1 %
Total volume of pollutants removed	11.8 tonnes

Cumulative total of captured pollutants from date of commissioning
More than 48 Tonnes removed over a 16 month period

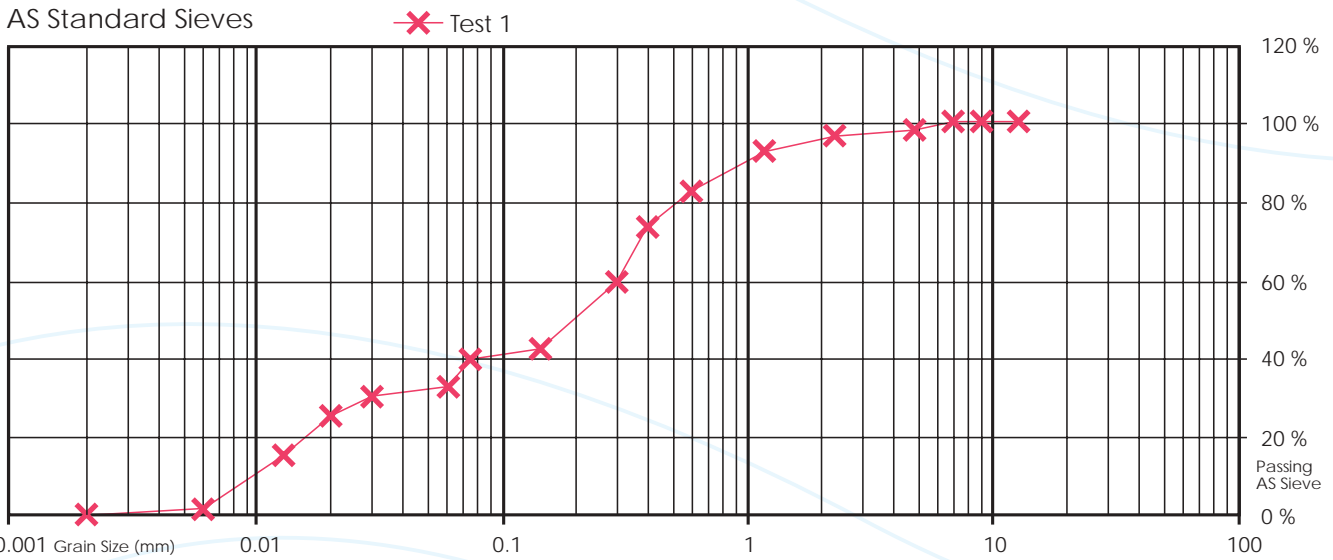


Cleaning of the Ecosol RSF 4000 unit at Bicentennial Park



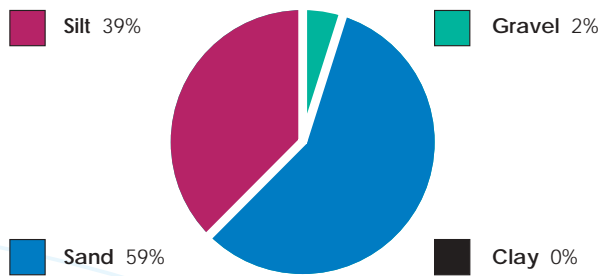
Captured and retained pollutants in the Ecosol RSF 4000 unit

Particle Size Distribution - RSF 4000 Bicentennial Park
Sieving in combination with hydrometer
21 February 2001



Test Method AS 1289.3.6.2
Soil Particle Density Assumed 2.65g/cm³/ASTM g/l hydrometer

Core Sample Composition - Silt and Sediment



Material analysis for Ecosol RSF 4000 unit at Shirley Strickland Drive, Homebush Bay

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