

Filterra® Bioscape®

A compact solution for high performance biofiltration



AUCKLAND

www.stormwater360.co.nz

Stormwater360®



LAKE TEKAPO

Filterra® Bioscape®

Green infrastructure has been used for decades to provide excellent treatment and ecological outcomes. Filterra Bioscape is a manufactured system providing market-leading enhanced treatment outcomes, which requires up as little as 10% the footprint of conventional treatment devices.

Filterra Bioscape is a collaboration between Stormwater360 and design consultants, placing the proven Filterra technology into bespoke designed, site-specific shape, built in situ encasement. Custom-designed flow distribution makes sure every part of the Filterra Bioscape is providing treatment, and full integration into any landscape design is possible. Whereas ponds and wetlands need rebuilding periodically, the Filterra Bioscape media should not need replacing.

Application

Ideally suited to land development projects where a centralised treatment solution is preferred, Filterra Bioscape can provide treatment for a range of applications:

- > **Greenfield and brownfield developments**
- > **Residential subdivisions**
- > **Mixed-use and commercial subdivisions**
- > **Local roads and highways**
- > **Catchments over 1ha**
- > **Retrofit sites**

Biological treatment system that will remove the majority of contaminants, reduce stormwater flows and blend in to the urban environment.



ŌMOKOROA



HASTINGS

Key Benefits

Footprint

High infiltration rate means the Filterra Bioscape requires as little as 10% of the footprint of conventional treatment devices, allowing more space for development or recreation.

Biodiversity

Manufactured in New Zealand from locally sourced materials, the Filterra Bioscape complements Low Impact Design (LID) principles. New Zealand native plant species promote biodiversity, community and cultural outcomes.

Maintenance

Planting, commissioning and 12 months of maintenance are included in the supply of the Filterra Bioscape. Only the mulch layer needs to be replaced every 6-12 months, sourced from an approved third party supplier. Under normal conditions, the media and plants should not need replacing.

Cost

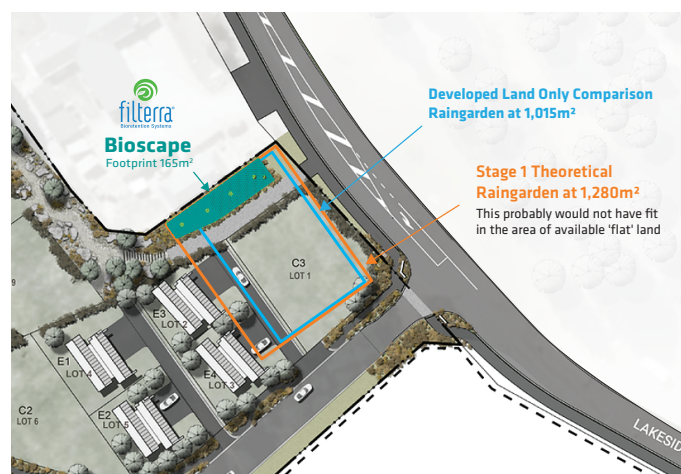
Filterra Bioscape offers substantial cost benefits when compared to traditional devices. The smaller footprint results in more developable area with less earthworks, and maintenance does not require a specialised contractor. A Life Cycle Cost report is available on request.

Quality Assurance

Filterra Bioscape media undergoes at least 25 quality assurance assessments to ensure pollutant removal, hydraulic conductivity and performance over time. Each batch takes over a month to produce. Plant trials have established successful plants for long term health of the system, and rigorous third-party tests in New Zealand, Canada, USA and Australia are available to demonstrate its TSS, metals and nutrient removal capabilities.



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Treating a 5.5ha subdivision, the proposed large format rain garden was 1,280m². The Filterra Bioscape required to treat water quality flows is 165m².



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Design

The Filterra Bioscape is a compact design solution that is an alternative to biofiltration systems. The design and delivery is a collaboration between consultants, contractors, asset owners and Stormwater360. Filterra Bioscape can be uniquely tailored to individual project requirements, site conditions and landscaping design contact us today for more information.

Collaborative Design & Delivery Support

Stormwater360 provides comprehensive support from initial design consultation to regulatory engagement, detailed design, construction assistance, and ongoing operation and maintenance support, ensuring successful implementation and long-term effectiveness of green infrastructure projects.

Detailed Design

Our engineers assist by providing site- or project-specific calculations and unit sizing to ensure compliance with treatment requirements. Stormwater360 can prepare tailored drawings for proposals, project meetings, and submittals, helping you to work more efficiently and confidently with clients and stakeholders. We can also provide supply cost estimates to support your solution selection process.

Construction Support

Stormwater360 liaises with the construction team for the pre, during and post construction requirements.

Planting, Operation and Maintenance

Manufactured in New Zealand from locally sourced materials, the Filterra Bioscape complements Low Impact Design (LID) principles. Using New Zealand native plant species to promote biodiversity, community and cultural outcomes. 12-month warranty ensuring healthy and robust vegetation. Stormwater360 operate and maintain the Filterra Bioscape for the first 12 months.



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Filterra Bioscape can be designed to blend into the surrounding landscape, with features supporting biodiversity, community and cultural needs.



LOWES PIT

Lowes Pit is a retrofitted Filterra Bioscape as part of a treatment train using pumped first-flush diversion, LittaTrap™ as pre-treatment, and Filterra Bioscape as biofiltration to effectively remove heavy metals, hydrocarbons, and pathogens within tight vertical constraints.



Treatment Outcomes

This pre-engineered, plug-and-play micro biofiltration system removes a wide range of pollutants, including heavy metals, nutrients, fine sediment, dissolved contaminants, oil, TSS, and gross pollutants, using natural biological processes. As an engineered Biofiltration device, it achieves very high stormwater pollutant removal and is accepted and approved for use across New Zealand.

Stormwater360's approach can provide transparent independent test reports from New Zealand, Canada, USA and Australia, with third party verification, certification and approvals over a range of land uses and applications. Contact us for independent test reports.

Cultural Design

Filtterra Bioscape is a land-based approach to stormwater management, using all natural processes and promoting a connection with the treatment and water body.

Filtterra Bioscape is a living asset. As a living system, care throughout its lifetime is critical to protect the health of the device and maintain the treatment performance over time.

Stormwater360 can help project teams address any cultural considerations or questions at the outset of developing our custom solution, incorporating the needs of all stakeholders in the design and implementation of each Filtterra Bioscape.



0800 STORMWATER (0800 786769)
www.stormwater360.co.nz





4.3ha Catchment

Proposed Wetland
873m²

Bioscape
120m²

Ōmokoroa

ENHANCED TREATMENT PERFORMANCE

873m² > 120m²

Proposed Wetland
footprint

Filtterra® Bioscape®
footprint

Filtterra Bioscape in action at the Ōmokoroa new housing development, nestled strategically at the bottom to treat stormwater runoff from the entire subdivision. With a focus on preserving water quality for the Tauranga Harbour, a vital ecosystem for swimming, fishing, and wildlife, this custom-designed Bioscape is a game-changer.

Despite its compact size of 120m², the Filtterra Bioscape impressively treats a total catchment of 4.36 Hectares at a rapid rate of 77L/second. In comparison, the proposed Wetland would require 873m² to achieve similar results.



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