



# PROVEN REVEGETATION SOLUTIONS

Developed in the lab, validated in the field



# ABOUT

Developed by pioneering Australian soil scientists over 12+ years, the EnviroStraw range of revegetation products are based on their unique BioGrowth™ system that uses the most recent and advanced soil science available. BioGrowth™ is EnviroStraw's microbial carbon revegetation program that holistically builds on conventional soil practices. It is a world first, EnviroStraw's answer to the erosion control and revegetation industry.

Even the most depleted sites can be revegetated using products, which contain built-in nutrients for sustainable growth and work faster (with less water) than standard hydromulch.

EnviroStraw products are Australian-owned and manufactured, environmentally friendly, and have been carefully developed to accommodate all land sloping variants.

## COMMERCIAL APPLICATIONS

After a period of intense research, development and testing, BioGrowth's hero product, EnviroMatrix ECM, has emerged as a cost-effective, self sustaining erosion control solution that is proven to work where topsoil has been lost or depleted due to:

- Development & infrastructure
- Steep slope work
- Mining activity.

ECM requires less water than other hydraulically applied hydromulch products and is biologically activated using a special blend of microbes. Containing a potent nutrient composition, ECM has a unique ability to revive soil in even the harshest conditions.

## GROUNDING IN SCIENCE

BioGrowth™ and EnviroStraw products have been developed by Australia's leading soil scientists and agronomists as a self-sustaining alternative to compost and other amendments.

## AWARD WINNING

EnviroStraw received an award for innovation from the International Erosion Control Association (IECA) in 2015 during the United Nations 'Year of Soils'.

## FUTURE VISION

Backed by unprecedented results, the BioGrowth™ system is easy to adopt and EnviroStraw products are widely available and fast becoming the preferred revegetation solution in Australia and globally.





# OUR PRODUCTS

The EnviroStraw range consists of 4 revegetation solutions. Product selection depends on slope and site requirements, with each solution combining various key ingredients to quickly establish vegetation.



**EnviroStraw HGM**  
**(Hydraulic Growth Medium)**  
A hydromulch that includes a biotic soil amendment and our agronomically designed soil conditioner. This thermally processed 'straw blended fibre' provides the ideal environment for controlled release and efficient nutrient uptake for establishing vegetation.



**EnviroStraw HGM - BFM**  
**(Hydraulic Growth Medium - Bonded Fibre Matrix)**  
Our signature hydromulch with added binders for more efficient uptake on steeper slopes.



**EnviroMatrix ECM**  
**(Erosion Control Matrix)**  
For highly problematic soils that are very low in carbon, our hero product includes 22 specially selected strains of beneficial bacteria and fungi with other essential nutrients - designed to help rebuild disturbed soils, increase soil carbon and improve soil health. Ideal for revegetating all areas including extreme slopes.



**GeoSpray**  
An alternative to geofabric that eliminates erosion caused by water, rain or wind. Using a spray-on technique, GeoSpray removes the labour-intensive, time-consuming and costly issues associated with laying geofabric. GeoSpray exceeds all industry specifications.

# PRODUCT COMPARISON

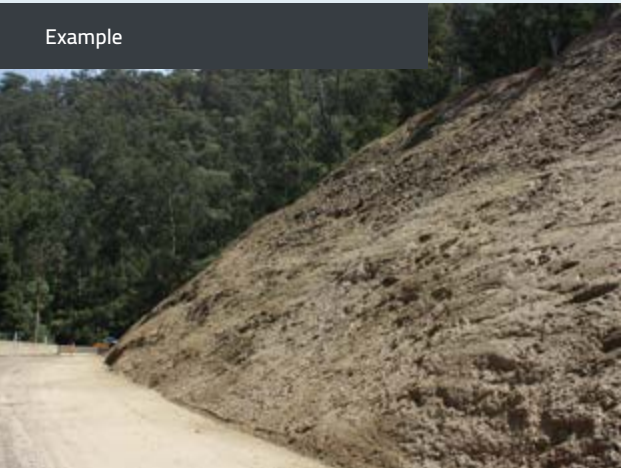
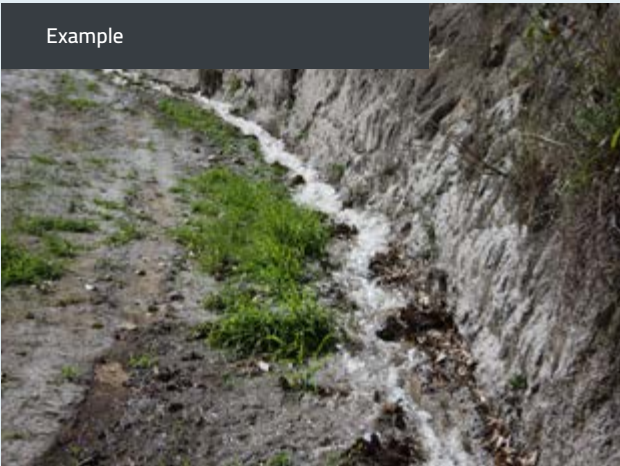
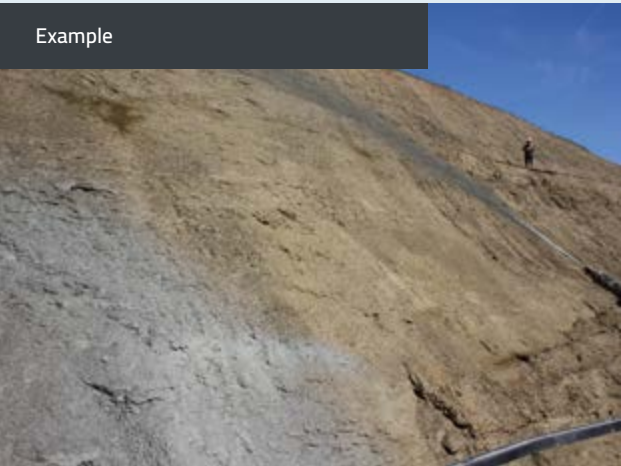
	 EnviroStraw™ HGM	 EnviroStraw™ HGM - BFM	 EnviroMatrix™ ECM
Weed free pathogen free	✓	✓	✓
Slope angle	<3:1	>3:1 - <2:1	>2:1 - <0.5
Biotic soil amendment	✓	✓	✓
Binder included	✗	✓	✓
Degradable interlocking fibres	✗	✓	✓
Volcanic mineral fertiliser	✗	✗	✓
Carbon building	✗	✗	✓
Non watering	✗	✗	✓



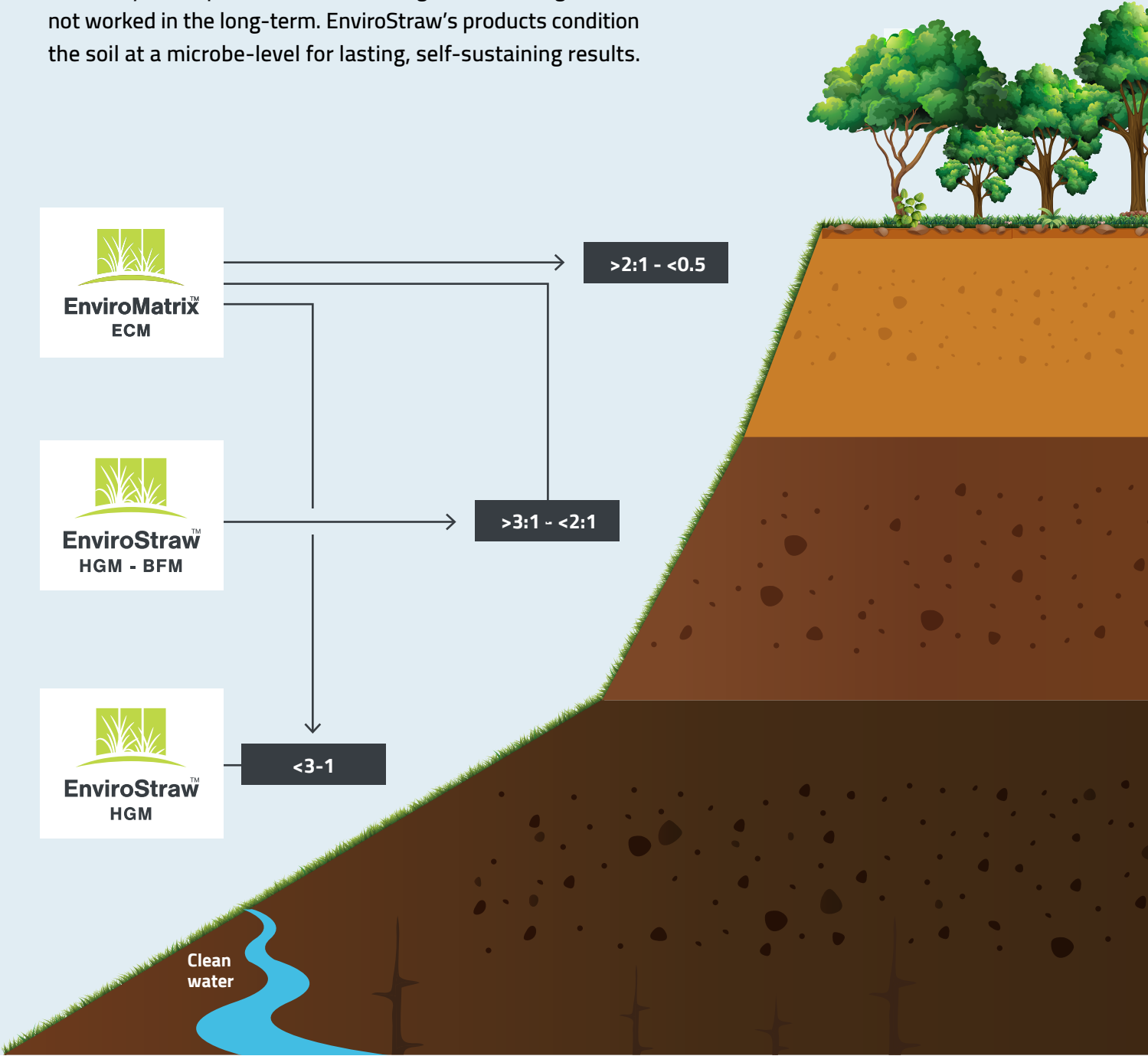
# DIVERSE AND FLEXIBLE APPLICATIONS

BioGrowth™ and EnviroStraw's products focus not only on commercial sites, but anywhere with poor soils such as:

- | Road cuttings
- | Fill batters
- | Rail projects
- | Landfill
- | Coal Seam Gas projects
- | Tailings dams and embankments
- | Creek diversions
- | Pipeline rows/exploration tracks



Studies have shown that sustained vegetation and improved soil health is the best way to control erosion and soil depletion caused by development. Until now, revegetation strategies have not worked in the long-term. EnviroStraw's products condition the soil at a microbe-level for lasting, self-sustaining results.

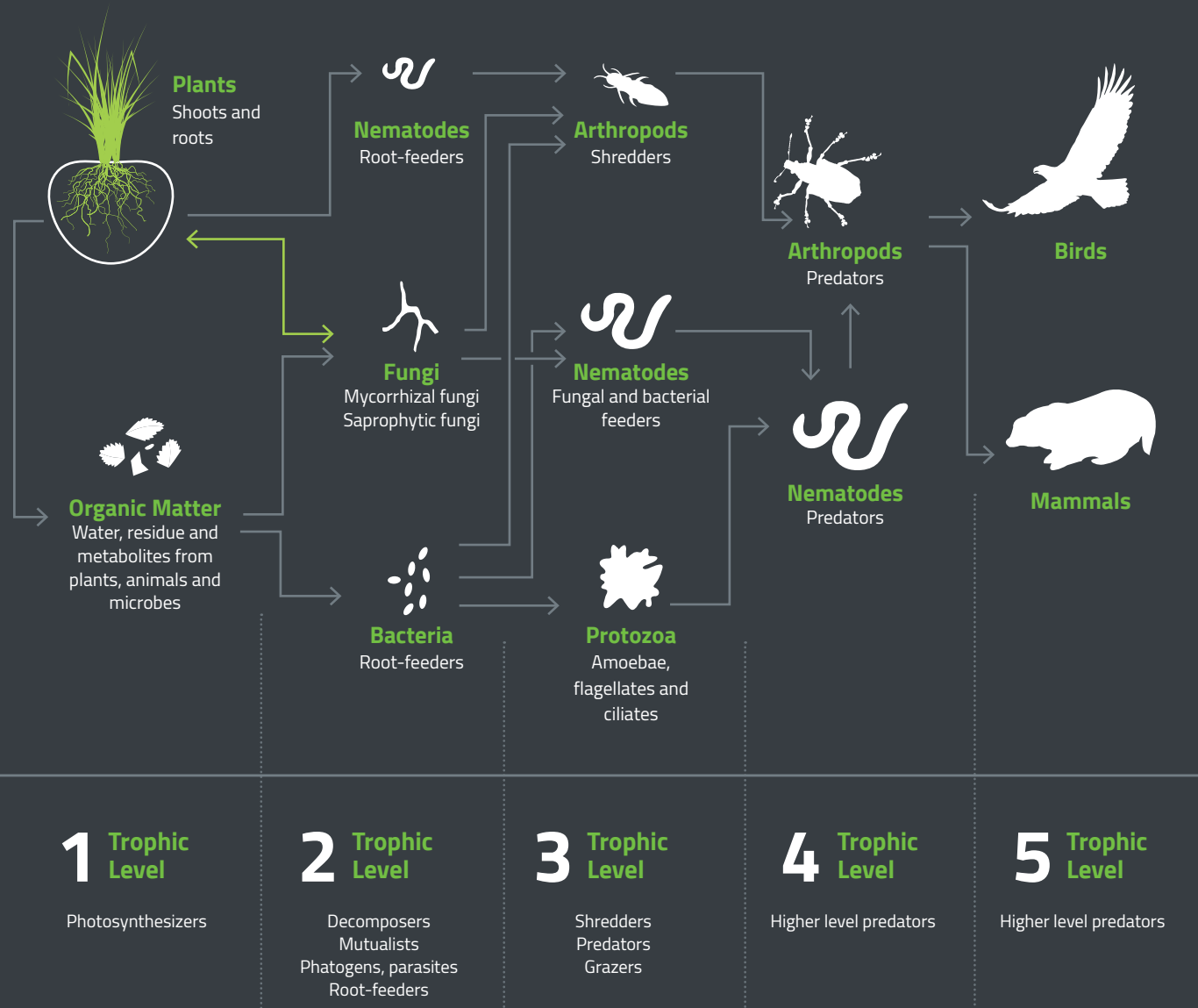


# HOW IT WORKS

EnviroMatrix ECM is a unique combination of organic fibres and humus-building components that quickly restores carbon levels and revegetates large expanses of land ravaged by development and mining, and control erosion.

As shown in the graphic below, EnviroMatrix ECM conditions the soil via a delicate blend of essential fungi, bacteria and natural minerals. This helps rebuild topsoil and soil health by mimicking the natural Soil Food Web.

## SOIL FOOD WEB



Soil scientists and microbiologists have discovered that a community of bacteria, fungi and other microbes exists in symbiosis with the root hairs of plants. EnviroMatrix ECM initiates the development of healthy soil through a combination of the essential elements that make up robust topsoil.

# 8 ESSENTIAL BENEFITS



### Encourages a strong root system

All EnviroStraw products are designed for sustainable long-term revegetation.



### Weed, pest and pathogen free

Our solutions are free from nasties and designed to work in harmony with the ecosystem.



### Won't pollute waterways

There is no toxic run-off to worry about.



### Australian owned and manufactured

Not only are our products developed by leading Australian scientists, they are also made here.



### Works faster and needs less water than standard hydromulch

What is truly remarkable about EnviroStraw products is how fast they work. Results can be seen in just a few weeks.



### Contains built-in nutrients for sustainable growth

EnviroStraw works with nature to revive soil and revegetate large expanses of depleted land.



### Proven to work in the harshest conditions


Even severely depleted soil on steep slopes responds extremely well to our hero product, EnviroMatrix ECM.



### Environmentally friendly

Our team recognised there is no need to resort to harsh chemicals because, nature has an incredible ability to heal itself given the right nutrients.





Advanced soil science that  
brings even the most ravaged  
land back to life.

## CASE STUDIES

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# ENVIROSTRAW CASE STUDY #1

Mine Site, Mackay QLD



Results



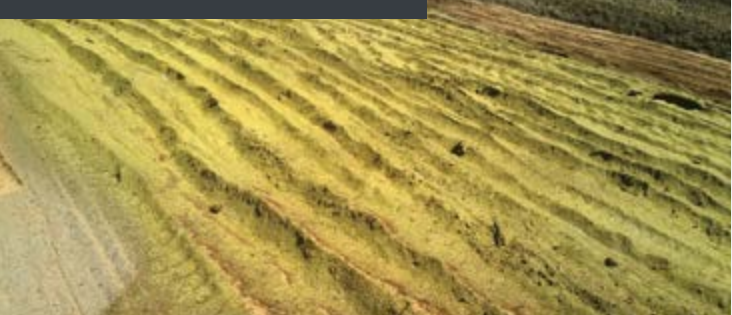
## The Challenge

Assessment of a large-scale water diversion revealed challenging conditions - soil was extremely dispersive with very low organic carbon levels, high sodicity (sodium levels) and hydrophobic properties.

## The Solution

EnviroStraw applied ECM at 6 tonnes per hectare with small quantities of lime and gypsum. To ensure total ground cover, ECM was applied in a two step process. Vegetation established quickly.

After 6 tonnes of EnviroMatrix applied



10 months after application



Revegetation results were seen within three months of the project starting and the self-sustaining area flourishes to this day.

Deep Root penetration achieved



Before: Low organic carbon levels





# ENVIROSTRAW CASE STUDY

Mine site, NSW



Results within 6 weeks



The Challenge

Locally sourced rock material from a mine site was used to build a railway track at Maules Creek, NSW. The site was subject to severe rill erosion and decomposition.

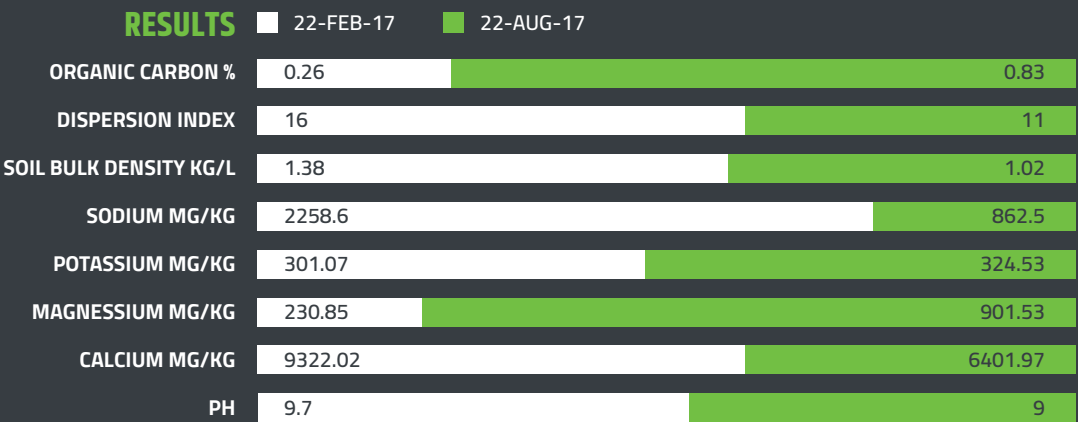
Traditional soil assessment indicated that high rates of calcium and magnesium amelioration were necessary to combat the erosion problem.

The Solution

EnviroStraw track rolled the batters with a wide track dozer to prepare the seedbed. ECM was applied at a rate of 10 tonnes/hectare. Within weeks vegetation had established without the need for calcium and magnesium.



Impressive revegetation activity was seen within four weeks of application on 30 June 2017, with multiple grass species establishing by 18 July 2017.





## The best & easiest hydromulch we have used

'No comparison, by far the best and easiest hydromulch we have used. We mix more and spray more area per tank. It looks great on the ground and the coverage is incredible.'

**HYTEK HydroMulch**

## By far the best hydromulch I have used

'By far the best hydromulch I have used. My team love using it, we can load 400 kg of EnviroStraw per tank in my Finn T120 and cover significantly more area per tank load. My Finn handles this product with ease.'

**JOCK HARCOURT, Grow Grass, Brisbane**

## The result is a well fed grass sprouting from my hydromulch

'I have been using Envirostraw for my Hydromulch work ever since it has been made available and I am very satisfied with the results. I find the cut of the straw to be even and contains no foreign material or pieces that are too big and can cause a blockage to my equipment. Thus it is ideal for spraying from hose or from the gun. The organic fertiliser component is a plus as I am able to cut down on the amount of chemical fertiliser used and the result is a well fed grass sprouting from my hydromulch.'

**NATHAN MAGNUS, Director of Hydro Spray Grass, Brisbane**



**For more information, please contact us:**

1300 868 669

[sales@envirostraw.com.au](mailto:sales@envirostraw.com.au)

[envirostraw.com.au](http://envirostraw.com.au)

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Developed in the lab, validated in the field

