

# Bio Gro Green Roof, Wall & Facade Substrates



Many cities around the world are now coming to regard green infrastructure - such as green roofs, walls and facades - as critical components of urban design.

Given the pressure on governments to plan for greater populations, increased urban density and climate change adaptation, there is a clear opportunity to incorporate green infrastructure into building design to create resilient, sustainable cities that improve community health and provide enjoyable places for people to live and work.

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# Green Roofs

A green roof is a vegetated landscape that is installed on a roof surface, and is built up from a series of either loose-laid layers, or modules made of pre-prepared layers in trays.

Vegetation on green roofs is planted in a growing substrate that can range from 50mm to over 1 metre in depth, depending on the weight-bearing capacity of the building's roof and the design.

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# Green Walls

Green walls are plants grown in vertical systems that are usually attached to internal or external walls.

Green walls differ from green facades in that plantings are made across the entire vertical structure, as opposed to planting at the base of the structure to enable vertical and horizontal growth.

In a green wall, plants, growing medium, irrigation and drainage are incorporated into the system.

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# Green Facades

A green facade is created by growing climbing plants up and across the facade of a building, either from plants grown in garden beds at its base, or by container planting installed at different levels across the building.

Climbing plants can attach directly to the surface of a building, or they can be supported on a structure independent of the building.

# Benefits

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## **Aesthetics, open space and urban food production**

Green walls, walls and facades can increase amenity and provide opportunities for food production, recreation, relaxation or commercial ventures.

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## **Improved thermal performance**

Green roofs reduce heat transfer through the roof and ambient temperatures on the roof surface, improving the performance of heating ventilation and air conditioning systems.

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## **Cleaning the air**

The inclusion of vegetation can contribute to the removal of gaseous pollutants and improve the air quality of indoor and outdoor environments.

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## **Storm water management**

Green roofs absorb and retain rainwater, and can be used to manage stormwater run-off in urban environments.

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## **Increased property value and other benefits for building owners**

Building owners and developers are increasingly installing green roofs, walls or facades to add a point of difference, increase commercial returns, provide visual appeal and turn buildings into a local landmark.

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## **Naturally cool a city**

Covering walls and roofs with a layer of vegetation that shades building materials which would otherwise absorb heat can help mitigate the negative consequences of urban 'heat islands' and provide natural cooling effects throughout a city.

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## **Creation and preservation of habitat and ecological biodiversity**

Green roofs can contribute to and enhance biodiversity by providing new urban habitats and specific habitats for rare or important species of plants and or animals.

# Substrate Requirements

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When formulating a growing medium for a green roof, wall or facade, it is important to distinguish the growing environment from traditional plant settings.

For over four decades, the Bio Gro range of specialist substrates have provided the crucial foundation for trouble-free cultivation and the success of wholesale and production nurseries all over Australia.

Our team of experienced horticulturalists and laboratory staff are able to engineer an individualised growing medium perfectly adapted to any green roof, wall or façade. The needs of the specific plants are taken into account, as are the technical, climatic and geographical factors.

We know that our customers' success heavily depends on the reliability of our growing media. Which is why, just like them, we place the highest possible demands on our products in terms of quality, performance and consistency.

Our substrates are available in bulk, 1 or 2 metres bulka bags, and 25 or 50 litre bags (subject to volume).

# Case Study



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## Burnley Living Roofs

The Burnley Living Roofs at the University of Melbourne's Burnley Campus is a world-class research and teaching facility – and the first of its kind in Australia.

The University of Melbourne established the purpose-designed green roofs to support the full spectrum of activities undertaken by their Green Infrastructure Research Group; and to demonstrate to the wider community how green transformations can be achieved in our cities.

There are three separate roofs, each with a specific function, and built for Australian conditions. Collectively the roofs will provide opportunities for teaching, community engagement activities and continuing professional and industry development.

In close collaboration with the University's leading academic green roof technology and urban horticulture researchers, we developed multiple substrates tailored to 500 plant species and various growing environments.

### **Substrate constituents:**

Composted Pine Bark, Scoria, Coir Peat, Zeolite, Perlite, Sand, Crushed Roof Tile, and Compost.



For more information, give us a call on  
**1800 BIO GRO (246 476).**

Or alternatively, contact us through our  
website at **[biogro.com.au](http://biogro.com.au)**.

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