



Viking
RoofGarden

bring your
roof to life

Roofspec
Viking

Taking care of detail

www.vikingroofspec.co.nz



Viking Roof Garden: **stunning environmental impact**

Helping improve the quality of life in our urban environments and reducing the impact on our limited resources.

The Viking Roof Garden system is designed to offer both functional and aesthetically appealing benefits:

Longer roof life

A roof garden protects the roof membrane from climate extremes; UV; and physical abuse, increasing the longevity of the roof.

Insulation – Both sound and temperature

A roof garden will provide some acoustic protection from exterior noise while keeping the building warmer in winter and cooler in summer.

Reduces urban heat and energy consumption

Impermeable urban surfaces like concrete and asphalt; conduct a significant amount of solar heat, whereas roof

gardens help insulate and shade buildings while their vegetation transpires, cooling the surrounding air while also reducing the energy required to make a building's interior comfortable.

Space saving

Using the roof surface to accommodate a roof garden means you are utilising the building's 5th wall to create useful, outdoor public space without displacing further real estate.

Stormwater management

The soil and drainage board system in a roof garden system acts like a sponge to absorb, delay and slowly release stormwater, reducing peak loads on city drainage infrastructure.

Air and water purification

Roof gardens help to purify the air by converting the CO₂ into oxygen thus reducing greenhouse gases. Additionally, the soil acts as a filter to assist with purifying the water and neutralising any potential acid rain impact.

Why a Viking Roof Garden?

A Viking Roof garden system incorporates a robust waterproofing membrane with cleverly designed proprietary drainage components and accessories, to provide an effective, tested and proven system.

Components of a Viking Roof Garden System (from the bottom-up)

- Electronic leak detection system
- CodeMark certified waterproofing membrane (Enviroclad or Anti-root torch-on)
- Heat-weldable Polypropylene (for Enviroclad option)
- 3-in-1 Drainage Board (protection fabric, drainage board cups and moisture retention layer)
- Aluminum drain protection boxes
- Aluminum garden edging
- Growth medium (roof garden specific soil formula)
- Ballasting where appropriate
- Appropriate vegetation

BRANZ Appraised

Viking's Roof Garden is New Zealand's only BRANZ appraised roof garden system using a sheet waterproofing membrane (versus a liquid applied one). Installed only by a Viking Approved Applicator, Viking Roof Garden is also backed by a 20-year warranty.



System Approach

The Viking Roof Garden is a complete system - not a concoction of parts that have been cobbled together from various suppliers. It's an internationally tested and proven, proprietary system made up of specialised components, developed by Carlisle Construction materials (USA) – one of the world's largest suppliers of membrane systems.

History-in-use

Viking has supplied roof gardens for many successful projects since the 90s without any failures.

MIRAdrain G4 Component

This drainage board composite is a multi-purpose 3-in-1 critical component that provides: an absorbent moisture retention layer to keep soil damp; a series of cups and holes that both retain and release water in controlled volumes, and a protection layer to ensure the root barrier below isn't damaged. The high compressive strength allows a multitude of overburden options to be used, e.g. pavers or traditional ballast, for alternative stormwater retention systems.

Aluminum Drainage Boxes

Specific to the Viking Roof Garden system, these boxes promote the drainage of stormwater while simultaneously protecting the drains from clogging with soil.



A considerably large green footprint has been left... on the roof

The Viking Roof Garden System has drastically transformed the look of this home.

THE CHALLENGE

An Auckland homeowner wanted to leave an extra green footprint when designing a kitchen-dining-living room extension at their Mt Eden character villa.

The extension resulted in a larger-than-normal proportion of the site being occupied by building. This required the designer to think outside the box as the disproportionately large roof area ran the risk of putting too much pressure on the public stormwater system during periods of heavy rain; leading to surface flooding.

It was vital to the homeowner, that his new roof solve this potential issue as well as have insulation properties, require little maintenance, stand the test of time and have a unique aesthetic presence.

THE SOLUTION

To address the possible stormwater issue and add an element of difference to their home, the homeowner decided to install a full Viking Roof Garden System, using Viking Enviroclad as the waterproofing membrane.

The soil of a roof garden system acts like a sponge to absorb, delay and slowly release stormwater while acting as a filter to purify the water. The oxygen produced by the planted vegetation helps to insulate and shade the building; reducing the energy consumption of the building and greenhouse gases. It also minimises the exposure of the actual waterproofing membrane to climatic extremes, increasing the life of the roof and its long term performance.

With approximately 120m² of roof garden surface area supporting an average of 500mm deep of growth medium; this took a huge amount of pressure off the public services, by providing an absorbent catchment facility of approximately 60m³. This feeds rain water into the stormwater system in a more controlled manner than would be the case if a sudden downpour pelted the impermeable surface of a traditional roof.

To add to this, some of the water from this roof will feed into a grey-water tank used for watering gardens; cleaning cars and flushing toilets.

THE RESULT

The Viking Roof Garden System has drastically transformed the roof of this extension and overall look of the entire home.

The homeowners really like the fact they are able to do their part when considering how their home and water usage affects public services, all while minimising the physical abuse his roof would have endured otherwise. This decision has led them making a considerably large, green, eco-friendly footprint.

An additional advantage is that the waterproofing and drainage components of a Viking Roof Garden System are backed by a 20-year product warranty.



CASE STUDY: Charteris Bay Roof Garden

A natural masterpiece with Viking Roof Garden

Viking Roof Garden helps this new home blend tastefully into its local environment.

THE CHALLENGE

It was vital to a Canterbury homeowner that their new home had a low visual impact on the local environment and skyline.

With the home being nestled into the hillside, they wanted to create a feeling of returning back to the land with the aesthetics needing to feel as natural as possible.

THE SOLUTION

To ensure their new home blended into its surroundings, the homeowners made the decision to utilise their home's '5th wall' and install a roof garden, with the extra natural element of planting native New Zealand Poa Citas; also known as a silver tussock.

Installing the roof garden wasn't a last-minute, spontaneous decision, so the traditional timber roof structure was engineered to withstand the additional weight of a green roof system.

The plywood substrate was waterproofed by a two-layer Torch-On membrane system developed specifically for roof gardens. The Viking 'Garden FLL Anti-Root' membrane undergoes a specialised chemical

treatment that trains the plant and tree roots to turn away from the membrane rather than penetrating it.

A Viking Roof Garden is a complete system of specialised layers that include proprietary drainage components and complementary accessories, so in this case, once all the components had been installed, the 180m² roof area was covered in 150mm deep of a growth medium; specially formulated for roof gardens.

Being a fine fawn grey foliage, and growing into a clump about 50cm tall, 800 Poa Citas were then used to complete the planting on the rooftop.

THE RESULT

The installation of this roof garden couldn't have gone better. The workmanship of the Viking Approved Applicator was excellent and all additional stakeholders involved: architect, builder, landscape architect and homeowners were beyond impressed with how the installed roof vegetation transformed the whole aesthetics of this Cliffside home.

The homeowners asked for a home that blends into the environment, and that's exactly what they got – a tasteful, but visually mesmerising natural masterpiece.

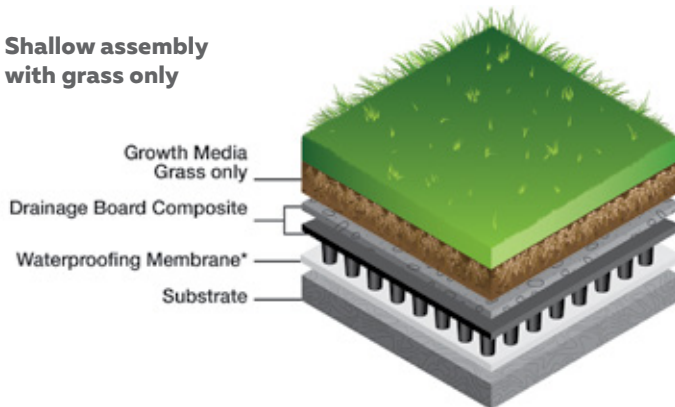


What are the options for your roof garden?

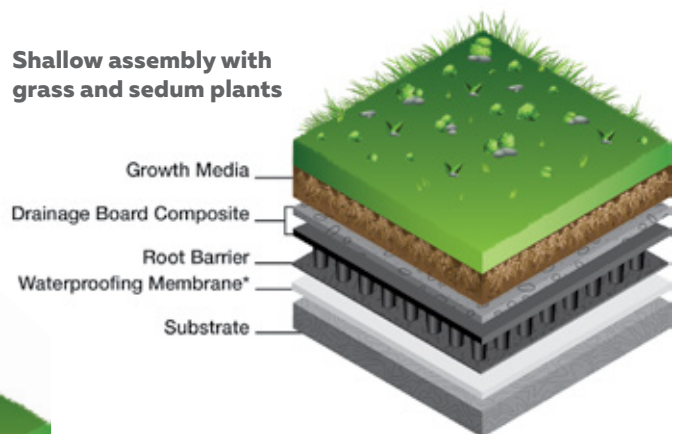
proven options to suit your needs

Viking Roofs spec offers a range of roof garden systems and works closely with all project stakeholders to create a custom roof system that meets New Zealand building code requirements and the needs of the building owner.

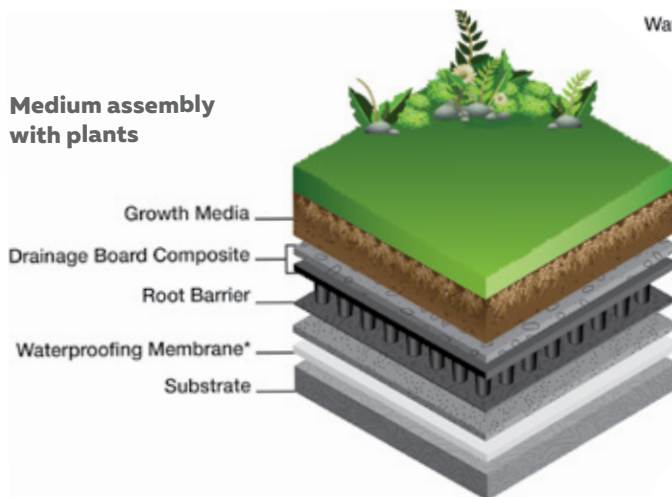
Shallow assembly with grass only



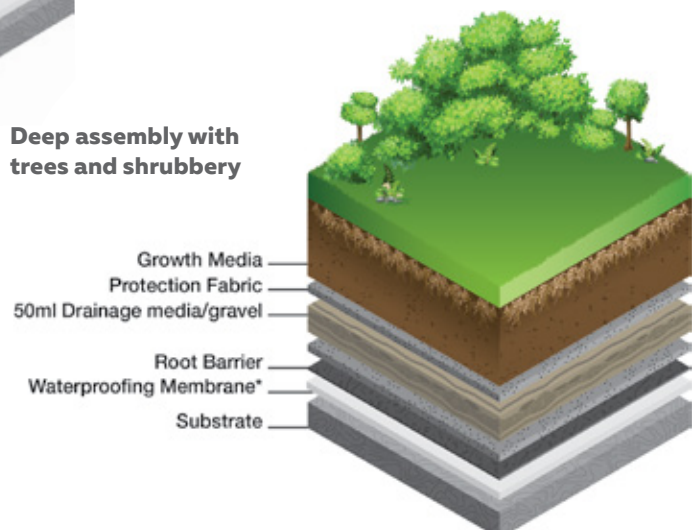
Shallow assembly with grass and sedum plants



Medium assembly with plants



Deep assembly with trees and shrubbery



*Waterproofing membrane - minimum thickness of 2mm for deep and medium assemblies, minimum 1.5mm for shallow assemblies

TECHNICAL INFORMATION SHEET

Viking Roof Garden System Components

The Viking Roof Garden System incorporates heat weldable, or torch-applied sheet waterproofing membrane technology with complementary layers and accessories (outlined below) to provide a high performance, watertight system.

Plants and Soil

The type and location of a building will impact on the specification of your roof garden. Certain plant and soil types are more conducive to a roof garden environment than others. We can recommend suitable plant and soil compositions to meet your needs.

Drainage Board Composite

This layer incorporates a combination of a moisture retention fabric that retains water from the soil above to draw on and a sheet with 'dimples', designed to retain the required amount of water in the upward-facing cups whilst slowly releasing the balance into the stormwater system. A protective fabric is bonded to the bottom for abrasion resistance.

Root Barrier

This polypropylene sheet is formulated to resist root penetration protecting the most important layer below, the waterproofing membrane.

The root barrier is loose laid although heat welded at the seams.

Membrane Option A Viking Enviroclad Membrane

Enviroclad is a wide sheet (3m) thermoplastic single-ply membrane with heat-welded (vulcanised) seams that create stronger, flatter laps. This technology allows for quicker installation time while assuring watertight integrity.

Membrane Option B Viking Roof Garden FLL Anti-Root Torch-On Membrane

The Viking Roof Garden FLL Anti-Root Torch-On Membrane two-layer system is designed to specifically deal with invasive roots. Aside from the chemical properties infused in the bitumen during manufacture, ensuring roots don't penetrate into the building, this membrane's exceptional rot-proof polyester reinforcing mesh has been designed to avoid shrinkage and withstand extreme structural movement.

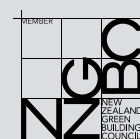
Aluminium Garden Edging

This is a 3m long L-shaped accessory with a series of vertical drainage slits running along its length to tastefully encase the garden assembly perimeter while separating it from walkways and transitions to drains



Aluminium Drainage Box

The drainage box fully protects the roof's drains from abrasive ballasting. The lid allows easy access to the outlet for maintenance.



Product Specification

CODE	DESCRIPTION	METRES
SRG001	Drainage Board Composite	1.2 W x lineal
SRG002	Root Barrier	3.6 W x lineal
STP510	Enviroclad Membrane	3.0 W x lineal
SRG004	Alum Edging	3.0 L x 75mm W x 100mm H*
SRG005	Alum Drainage Box	0.53m ² x 100mm H*

* Other dimensions available on indent

masterspec



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to meet your needs**

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