

Green roof

A green roof is a roof or deck onto which vegetation is intentionally grown or habitats for wildlife are established.

There are two main types of green roof:

- **Intensive**

Typically have deeper substrates (>200 mm) capable of supporting shrubs and trees and generally they have the appearance of roof gardens. They will require significant management and maintenance in terms of irrigation.

- **Extensive**

Green roofs typically have a shallower substrate layer (<150 mm), support low-growing, drought-tolerant plants and require low maintenance. Extensive roofs are the most common type.

Benefits of a green roof

A green roof will provide benefits such as:

- Green stepping stones for wildlife
- Water storage - SuDs*
- Sound dampening
- Production of oxygen
- Absorbing air pollutants, dust and CO₂
- Visual aesthetics to sites
- Insulation (increased thermal mass)

*Sustainable Drainage Solution



Sedum roofs in the National Park

It is advised that sedum-only roofs are avoided in the National Park, due to the limited number of native sedum species.

There are only two species of sedum native to Pembrokeshire that are suitable for inclusion in a green roof:

- Sedum acre - Goldmoss stonecrop
- Sedum anglicum - English stonecrop

The implementation of a sedum roof with only two species would result in a roof with limited ecological and aesthetic value

The use of other sedums (including garden varieties) for a green roof in Pembrokeshire would not be acceptable as they can become invasive, putting native species at risk.

Protected habitats

Maritime, Cliff and Crevice communities are abundant along our coastline; often listed as features of designated sites such as:

- Special Areas for Conservation (SAC)
- Sites of Special Scientific Interest (SSSI)

Once a plant has escaped into the wild it can be difficult and costly to eradicate.

In many cases eradication is impossible and can have a long term impact on the ecology of protected and special habitats.

Species suitable for a Coastal Green roof

Scientific Name

Achillea millefolium
Aira caryophylla
Aira praecox
Anthyllis vulneraria
Arenaria serpyllifolia
Armeria maritima
Bromus hordeaceus
Centaureum erythraea
Cerastium diffusum
Cochlearia danica
Cochlearia officinalis
Erodium cicutarium
Euphorbia portlandica
Festuca ovina
Festuca rubra agg
Galium verum
Hieracium pilosella
Jasione montana
Koeleria macrantha
Leontodon taraxicoides
Lotus corniculatus
Matricaria maritima
Myosotis ramosissima
Plantago coronopus
Ornithopus perpusillus
Plantago lanceolata
Plantago maritima
Sagina apetala
Sagina maritima
Sanguisorba minor
Scilla verna
Sedum acre
Sedum anglicum
Silene maritima
Spergularia rupicola
Thymus praecox
Trifolium arvense
Veronica arvensis

Common Name

Common yarrow
Mouse grass
Early hair grass...
Kidney vetch
Thyme-leaved sandwort
Thrift
Soft brome
Common centaury
Sea mouse ear
Danish scurvygrass
Common scurvygrass
Common stork's bill...
Portland spurge
Sheep's fescue...
Red fescue...
Lady's bedstraw...
Mouse-ear hawkweed
Sheep's bit scabious
Crested hair grass
Lesser hawkbit
Bird's-foot trefoil
Sea mayweed
Early forget-me-not
Buck's horn plantain
Bird's-foot
Ribwort plantain..
Sea plantain
Annual pearlwort...
Sea pearlwort
Salad burnet...
Spring quill
Biting stonecrop
English stonecrop
Sea campion
Rock sea spurrey
Wild thyme...
Hare's-foot clover
Wall speedwell...

- '...' Represents species with other common names
- Species listed - National Vegetation Classification Maritime Therophyte* community MC5
- *Therophyte - Any plant which survives unfavourable conditions in the form of seeds only



National Park green roof preferences

The use of native species and the mimicking of natural habitats helps to provide the maximum benefits for the wildlife and landscape of the National Park. To encourage these benefits the more typical choices for a green roof would be:

Pembrokeshire 'coastal' roof

This type of roof will comprise plants which are highly adapted to coastal conditions and as a result will tolerate drought, high levels of exposure and salt-laden winds, making them ideal for our environment. Some of these plants also undergo colour changes during times of drought that provides additional visual interest.

A species list of suitable plants is provided in the leaflet.

UK native wildflower roof

These normally comprise a mix of flowers and grasses which are native to the UK and are often available from major suppliers as plugs, seeds or as a 'ready-to-roll'* option.

Ready-to-roll options can sometimes include non-native species which can be unsuitable.

These types of product would only be considered in inland locations following approval of the species included.

- *'Ready to roll' – This is a complete seed stock and substrate layer product sold in the form of a mat / blanket / carpet



Further information

External guidance documents:

- 'The Green Roof Code' by GRO
- 'Guide to DIY Green Roofs' by GRO
- 'Creating Green Roofs for Invertebrates' by Buglife
- www.pembrokeshirecoast.wales

Please note:

This leaflet is intended to be a helpful and simple guide and should not be regarded as a full interpretation of a green roof implementation.

If you have any doubts regarding possible planning requirements or other questions, please contact:

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LANDSCAPE LEAFLET 1

Pembrokeshire Coast National Park Authority 2019



Green Roof Guidance

in the
Pembrokeshire Coast National Park



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Pembrokeshire Coast National Park