



Suggested Plant Species Suitable for Green Roofs



Ahead of producing an ecological guidance document for green roofs, Natural Environment has worked with the Société Jersiaise Botany Section to produce a set of criteria recommending plant species for green roofs. The criteria used for selecting plant species for green roofs are:

- exclude all plant species protected under the [Wildlife \(Jersey\) Law 2021 \(jerseylaw.je\)](http://jerseylaw.je)
- exclude non-native species but including a small number of archaeophyte colonists.
- exclude invasive or potentially invasive species [Jersey » NNSS \(nonnativespecies.org\)](http://nonnativespecies.org)
- exclude any other species which are of particular conservation concern (e.g. only a single known population) - your ecological consultant can advise on this.

The selection was made by looking at widely available seed mixes that are suitable for growing on green roofs. The species recommended meet the best practice guidelines.



The green roof at Healing Waves, Le Braye, showing how green roofs can soften buildings into the landscape. Red Fescue was used. Photo by Chris Bester

Before looking at the species to plant on green roofs it is useful to clarify the types of green roofs that exist, as the structure of the roof must be considered right from the beginning.

Put simply a green roof is a construction made of layers, that is added to your roof to create an environment suitable for growing vegetation. Although there are examples of green roofs that date from early history these were generally more about keeping buildings insulated; the modern phenomenon of green roofs as an enhancement to the environment began in Germany in the 1970s.

Sedum Only Roofs

Sedum roofs are the least biodiverse of green roofs. They are a type of extensive roof. They have very shallow growing medium between 20-60 mms and are low nutrient. They support less biodiversity than other roof types because of their short flowering season and because they have often been planted with non-native species that are less valuable for native insects. The advantages are that they can be established quickly, they help with sustainable drainage systems, and they require low but periodic maintenance. The main disadvantage is they do not provide ecological value / Biodiversity Net Gain and therefore cannot be proposed or justified for this purpose in a planning application.

Extensive biodiverse roofs

Extensive biodiverse roofs are mostly light-moderate weight and have around 50-150 mms of growing medium. They can support a range of flowering plants and grasses. They can be established very quickly especially when the plants are provided in pre-grown mats, but establishing from seed is perfectly acceptable. They generally have saturated weight less than 250kg per square metre. They require maintenance and watering much like a garden would. The greater the number of plant species with a wide range of flowering times supports a wider range of biodiversity.

Intensive Roofs

Intensive roofs have deeper substrate typically between 200-400 mms so can support a wider range of plants, shrubs and even small trees. They have a higher nutrient requirement and require regular watering or an irrigation system. They are above 250kg per square metre saturated weight. The larger weight loading needs to be considered in the planning of them. Roof gardens are included in this category.

Semi intensive roofs

Semi intensive roof fall in the middle they need between 100–200 mms of growing medium and can support perennials but not trees and shrubs. They require weeding and watering and may take up to 18 months to establish.

Blue roofs

Blue roofs can be stand alone or incorporated into the green roof design. As weather intensity increases due to changes in climate and more permeable surfaces are built on in our towns, the likelihood of flooding is increased. Blue roofs are constructed to reduce the speed of rainwater run-off and so manage stormwater. In areas of known flood risk, they are becoming a more common requirement. They are part of what is known as sustainable drainage systems (SuDS).

*For technical information on creating a green roof we recommend working with a suitably qualified professional and referencing an industry standard such as **The GRO Green Roof Code**.*



Suggested wildflower species for green roofs

Autumn Hawkbit	<i>Scorzonerooides autumnalis</i>	Musk-mallow	<i>Malva moschata</i>
Bell Heather	<i>Erica cinerea</i>	Oraches	<i>Atriplex spp</i>
Betony	<i>Betonica officinalis</i>	Oxeye Daisy	<i>Leucanthemum vulgare</i>
Biting Stonecrop	<i>Sedum acre</i>	Perforate St. John's-wort	<i>Hypericum perforatum</i>
Black Medick	<i>Medicago lupulina</i>	Red Campion	<i>Silene dioica</i>
Bladder Campion	<i>Silene vulgaris</i>	Red Clover	<i>Trifolium pratense</i>
Broom	<i>Cytisus scoparius</i>	Red Valerian	<i>Centranthus ruber</i>
Buck's-horn Plantain	<i>Plantago coronopus</i>	Ribwort Plantain	<i>Plantago lanceolata</i>
Bulbous Buttercup	<i>Ranunculus bulbosus</i>	Rock Samphire	<i>Crithmum maritimum</i>
Common Bird's-foot-trefoil	<i>Lotus corniculatus</i>	Saw-wort	<i>Serratula tinctoria</i>
Common Cat's-ear	<i>Hypochaeris radicata</i>	Scarlet Pimpernel	<i>Anagallis arvensis</i>
Common Centaury	<i>Centaureum erythraea</i>	Scented Mayweed	<i>Matricaria recutita</i>
Common Daisy	<i>Bellis perennis</i>	Scentless Mayweed	<i>Tripleurospermum inodorum</i>
Common Dog-violet	<i>Viola riviniana</i>	Sea Campion	<i>Silene uniflora</i>
Common Knapweed	<i>Centaurea nigra</i>	Sea Holly	<i>Eryngium maritimum</i>
Common Poppy	<i>Papaver rhoeas</i>	Sea Mayweed	<i>Tripleurospermum maritimum</i>
Common Sorrel	<i>Rumex acetosa</i>	Sea Purslane	<i>Atriplex portulacoides</i>
Common Stork's-bill	<i>Erodium cicutarium</i>	Sea Sandwort	<i>Honckenya peploides</i>
Common Vetch	<i>Vicia sativa</i>	Selfheal	<i>Prunella vulgaris</i>
Corn Marigold	<i>Glebionis segetum</i>	Sheep's-bit	<i>Jasione montana</i>
Corncockle	<i>Agrostemma githago</i>	Thrift	<i>Armeria maritima</i>
Cornflower	<i>Centaurea cyanus</i>	Tormentil	<i>Potentilla erecta</i>
English Stonecrop	<i>Sedum anglicum</i>	Viper's Bugloss	<i>Echium vulgare</i>
Fennel	<i>Foeniculum vulgare</i>	Wild Carrot	<i>Daucus carota</i>
Field Forget-me-not	<i>Myosotis arvensis</i>	Wild Clary	<i>Salvia verbenaca</i>
Foxglove	<i>Digitalis purpurea</i>	Wild Marjoram	<i>Origanum vulgare</i>
Gorse/Western Gorse	<i>Ulex europaeus/Ulex galli</i>	Wild Teasel	<i>Dipsacus fullonum</i>
Heather	<i>Calluna vulgaris</i>	Wild Thyme	<i>Thymus polytrichus</i>
Herb-Robert	<i>Geranium robertianum</i>	Yarrow	<i>Achillea millefolium</i>
Lady's-bedstraw	<i>Galium verum</i>		
Lesser Stitchwort	<i>Stellaria graminea</i>		
Meadow Buttercup	<i>Ranunculus acris</i>		
Mouse-ear-hawkweed	<i>Pilosella officinarum</i>		

Suggested graminoid species (grasses and sedges) for green roofs

Common Bent	<i>Agrostis capillaris</i>	Marram Grass	<i>Ammophila arenaria</i>
Common Sedge	<i>Carex nigra</i>	Red Fescue	<i>Festuca rubra</i>
Crested Dog's-tail	<i>Cynosurus cristatus</i>	Sea Couch	<i>Elymus athericus</i>
Crested Hair-grass	<i>Koeleria macrantha</i>	Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>
Glaucous Sedge	<i>Carex flacca</i>	Sheep's-fescue	<i>Festuca ovina</i>

Where to get plants and seed

Plants can be purchased as plugs or seeds and companies like Bauder supply pre-planted mats.

Local Suppliers

Local garden centres and agricultural suppliers may be able to supply seed of the listed species. **The Wildflower Hub**, based at the **Botanic Gardens at Samarès Manor**, grows and sells seed of local provenance.

Examples of some UK Suppliers

British Flora <https://grassandflower.co.uk/british-flora>

Meadow Mania <https://meadowmania.co.uk>

Bauder <https://www.bauder.co.uk/green-roofs>

Kings Seeds <https://www.kingsseeds.com>

- **If purchasing seed mixes, please check that they only contain species recommended on this list.**
- **Please check when ordering seed that no agricultural varieties are included. These have very vigorous growth and the potential to escape and spread in the natural environment to the detriment of local plant species.**

The following images are just to illustrate what some of the recommend plant species look like along with some of their characteristics.



Common Thrift (*Armeria maritima*) is an evergreen plant with compact cushions of needle-like leaves. The pink spherical flower heads are born on slender long stems. Seen locally growing along the Five Mile Road and on cliff tops in Spring and early Summer.



Sea Holly (*Eryngium maritimum*) provides attractive grey green spikey leaves and intensely blue flowers. It is naturally drought resistant and would complement any green roof in a seaside location.



Lady's-bedstraw (*Galium verum*) produces a low growing carpet of green bearing frothy yellow flowers in dense clusters. It flowers from May to September. The flowers produce a sweet honey scent.



Yarrow (*Achillea millefolium*) is a tough plant of many grasslands, meadows and verges. It copes well in dry conditions. It flowers from June to November. Its flat-topped white flower heads attract many pollinators.



Red Campion (*Silene dioica*) is a medium-height perennial that flowers all year round making it excellent for pollinators.



Sweet Vernal-grass (*Anthoxanthum odoratum*) is a perennial grass that flowers early in the year and provides attractive flower heads through to Autumn.