



*Premier Wholesale Producer
of Native British Wildflower and
Aquatic Plants*

www.phoenixamenity.co.uk

Welcome

to Phoenix **Native Flora's** Information Pack. Our species listing includes comprehensive information on each plant species such as flowering colour, height and flower period. We include our full range of products, pot and tray sizes. A technical note and explanation of our tray and pot sizes provides product information for our customers. It is our intention that this inclusion will make our client's task of quoting for projects and jobs much quicker and easier and our sales and technical team are there to help with any further queries you may have.

Contents

<i>Introduction</i>	3
Coir Pallets	4
Coir Rolls	6
BioHaven® Floating Islands	8
<i>Species List</i>	
Wildflowers	10
Grasses & Sedges	18
Marginals & Aquatics	20
Seed Mixtures	24
<i>Bioverse Green Roof</i>	
General Information	36
Species List	42
Alternatives	44

<i>Mycorrhizae Products</i>	45
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“ Largest Specialist grower and supplier of over 300 British native wildflowers, marginal & aquatic plants and seed with over 25 years experience. ”

Introduction

Phoenix **NativeFlora** has always been at the forefront of innovation and research for producing high quality British native plants from seed and vegetative material. We produce commercial quantities of native plants for a diverse range of applications such as remediation, reed beds, wildlife habitat creation and native species green roofs.

Phoenix **NativeFlora** offers a complete range of British native flora with full British provenance that is grown exclusively on a purpose built nursery. We do not import plants in from Holland or elsewhere and we guarantee that all our plants are grown by us. We produce native Wildflowers, Grasses and Sedges, Aquatic and Marginals including vast quantities of *Phragmites australis*. We also grow and sustainably harvest submergents or oxygenating plants, including native Water lilies.

As always at Phoenix **NativeFlora** we only grow British native plants that are derived from fully known British provenance, either from our own seed bank or from trusted sources. We also collect seed and vegetative material with full permissions from various organisations such as the Environment Agency and Local Authorities. We pride ourselves on our commitment to enhance our environment and preserve our indigenous flora for generations to come, be it by remediation, habitat creation or native species green roofs.

In 2012 Phoenix **NativeFlora** completed

its own in-house environmental policy by switching to **PEAT FREE COMPOST** for all our sowings and transplanting. We have researched and trialled the make up of our compost and now have a formulation that gives consistent germination, controlled growth and is importantly, environmentally friendly. Our compost contains a starter charge fertiliser that ensures a controlled release of nutrients to ensure rapid establishment be they plugs or more mature plants.

We have an experienced Technical Team that can assist with planting details, species choice for specific areas and work closely with a dedicated ecologist, who are available for site visits. We offer highly professional expert advice and have a wealth of knowledge covering all aspects of habitat management, planting advice and problem solving. Our expertise in native species green roofing is well known in the industry and we continue to see a rapid expansion of this arm of our business.

Our Sales Team are highly dedicated, with strong people skills and are there to make your life easier. Phoenix **NativeFlora** strives to be the best we can be and we believe in the products we sell and why we sell them. We are driven by more than the need to make a profit and that makes us stand out from the crowd.

Phoenix **NativeFlora** stands for quality, integrity and a commitment to the environment.

COIR PALLETS

Description



- We produce and pre-establish high quality Coir Pallets with mature aquatic vegetation for numerous applications.
- Coir Pallets can be an excellent technique for establishing native marginal vegetation around lake edges, streams and rivers banks.
- Coir Pallets are an organic living revetment and provide erosion control and rapid vegetation establishment.
- Coir Pallets are produced as 1m and 0.5m wide units to suit various applications.
- Coir Pallets are available unplanted or pre-established with mature native wetland plants. Standard plant mixes are usually available from stock all year round or specialist mixes can be contract grown to order.

- We have developed a range of specific species mixes for use in all types of water bodies.
- We plant our pallets at a high density and grow on at the nursery from between 12 to 24 months to ensure that the vegetation is dense and provides an instant hardy cover.



“ Mature Coir Pallets are often used for ecological restoration projects where mature vegetation needs to be established rapidly, noticeably for protected species such as Water Voles and Great Crested Newts. ”



Applications

- Water Vole Habitat Creation
- Wetland & Reedbed Establishment
- Habitat Ponds & Great Crested Newts
- River Restoration
- River Bank Erosion Control: Bioengineering Solutions



Water Voles are the fastest declining mammal in the UK and habitat loss has been a major factor in this decline



Our Newt Mix is established at our nursery to full maturity with species known to provide newt habitat and uses plants that allow them to lay their eggs on



Coir Pallet growing beds at our nurseries

SPECIFICATION

Net Specification

Net Material:

3mm coir twine yarn in a square mesh pattern

Net Opening:

50mm

Stuffing

Virgin coir mattress fibre:

Dust removed at manufacture

Not less than 50mm length, typically 100mm to 150mm

Optimum depth of evenly distributed stuffing:

40-50mm with approximately 2.5kg of coir fibre per m² dry weight.

Standard Pallet Sizes

2m x 1m x 40-50mm depth

2m x 0.5m x 40-50mm depth

COIR ROLLS

Description



- We produce a wide range of pre-established Coir Rolls planted with high quality native plant species.
- We plant our Coir Rolls at a high density and grow on at our nurseries from between 12 to 24 months to ensure that the vegetation is dense and provides a robust revetment and instant vegetation cover.
- Mature Coir Rolls are often used for Ecological Restoration projects where mature vegetation needs to be established rapidly, noticeably for protected species such as Water Voles.
- Coir Rolls are available unplanted or pre-established with mature native wetland plants.

- Standard plant mixes are usually available from stock all year round or specialist mixes can be contract grown to order.
- Coir Rolls are produced as 0.2m and 0.3m diameter units as standard.



“ We produce high quality Coir Rolls with mature aquatic vegetation for numerous applications - an excellent technique for establishing native marginal vegetation around lake edges, streams and rivers banks. ”



Applications

- Water Vole Habitat Creation
- Wetland & Reedbed Establishment
- Habitat Ponds & Great Crested Newts
- River Restoration
- River Bank Erosion Control: Bioengineering Solutions
- Moorland Restoration



Our Water Vole rolls are grown for between 12 to 24 months so that the vegetation is mature and provides the fastest method of establishing water vole habitat available



Pre-established Coir Rolls on a Water Vole habitat creation scheme

SPECIFICATION

Net Specification

Net Material:

UV stabilised polypropylene multi filament net

2.5mm diameter with a minimum tensile strength of 0.84kN

Roll end closed by stitching with a 3mm diameter multi filament braided UV stabilised polypropylene yarn

Breaking strength of individual yarn no less than 102kg

Net Opening:

50mm, diamond mesh pattern

Stuffing

Virgin coir mattress fibre:

Machine filled to maintain constant density of coir fibre

Fibres >50mm length, typically 100mm to 150mm

Compressed density:

8kg/metre (based on 300mm diameter Coir Roll)

Will not compress more than 15% when an 80kg weight (average man) is applied

Standard Roll Sizes

3m long by 0.2m diameter

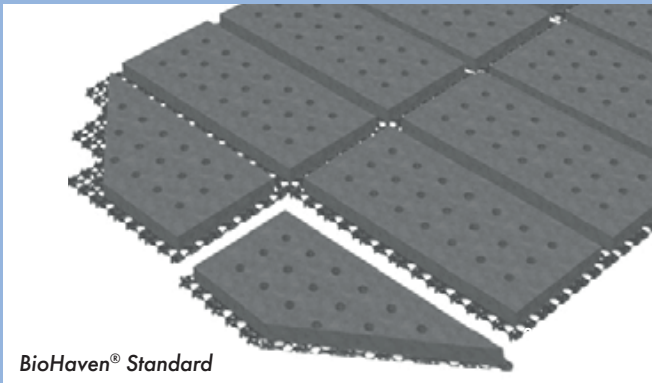
3m long by 0.3m diameter

We can manufacture a variety of lengths to suit site conditions.

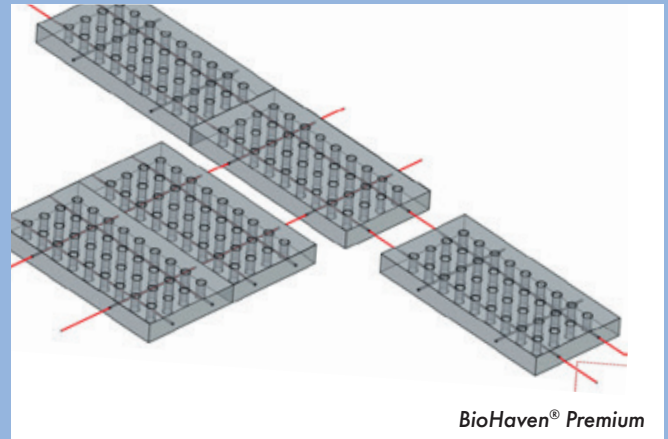
Coir Rolls are manufactured in the UK using virgin mattress type coir fibre.

BIOHAVEN® FLOATING ISLANDS

Description



BioHaven® Standard



BioHaven® Premium

- BioHaven® is a Floating Constructed Wetland, it allows us to bring the water treatment and habitat benefits of a wetland to almost any water body.
- Wetland plants provide beautiful and diverse habitat, whilst the root structure delivers natural biological treatment in the water column.
- BioHaven® is versatile, from small-scale habitat and water quality projects to highly engineered solutions for floating solar power, wastewater treatment and wave attenuation.
- All BioHaven® products rely on the same principle of internal buoyancy set in a high surface area matrix engineered for high plant success rates, long term plant establishment and water treatment.



Pre-grown BioHaven®

“ BioHaven® is a tool that lets us bring the incredible benefits of a wetland into water bodies that cannot accommodate a natural wetland ”



Applications

- Lake, pond and river regeneration projects
- Habitat gain and water treatment in urban and rural water bodies
- High energy rivers
- Coastal works
- Floating solar power projects
- Wastewater and leachate treatment



Kings Cross, Regent's Canal



Apley Woods Fishing Lake, Telford

SPECIFICATION

BioHaven Standard

A high specification module with integral connection system allowing quick and easy installation

Module size: 2 x 1m²

Connection system: HPDE connection grid system

Installation: designed for self installation (design & build also available)

Suitable for: lake, pond and river regeneration projects. Habitat gain and water treatment in urban and rural water bodies

BioHaven Premium

An engineered solution designed for commercial applications and high energy environments

Module size: from 2 x 1 metres (2m²) up to 3 x 2 metres (6m²) Connection system: steel cables connect modules via internal conduits

Installation: typically design and build contracts, specified by consultant engineers

Suitable for: high energy rivers, coastal works, floating solar power projects, wastewater and leachate treatment

Pre-grown BioHaven

- Available in premium or standard specification
- Launch a fully established bioreactor into your pond, lake or river with instant nutrient processing capacity and beautiful year round habitat
- Can be contract grown to specification with wide selection of wetland plants



PHOENIX native flora *is Peat Free* ,



WILDFLOWERS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Achillea millefolium</i>	Yarrow	White	July	October	Grassland, Hedgerow	8-40cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Achillea ptarmica</i>	Sneezewort	White	July	August	Heathland, Wet Grassland, Wet Woodland	20-60cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Agrimonia eupatoria</i>	Common Agrimony	Yellow	June	September	Grassland, Hedgerow	up to 60cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Grizzled Skipper
<i>Agrostemma githago</i>	Corn Cockle	Pink	May	August	Arable, Grassland	60-100cm	Annual	Upright	Full Sun	Wide Range		
<i>Ajuga reptans</i>	Bugle	Blue	April	June	Hedgerow, Woodland, Wet Grassland	10-30cm	Perennial	Prostrate	Shade to Semi Shade	Neutral to Calcareous		Grizzled Skipper
<i>Alliaria petiolata</i>	Garlic Mustard	White	April	July	Hedgerow, Woodland	40-120cm	Biennial	Upright	Shade to Semi Shade	Neutral to Calcareous		Green Veined White, Orange Tip
<i>Allium ursinum</i>	Ramsons	White	April	June	Hedgerow, Wet Woodland	up to 45cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Anagallis arvensis</i>	Scarlet Pimpernel	Red	June	August	Arable, Coastal, Grassland	up to 30cm	Annual	Prostrate	Full Sun	Neutral to Calcareous		
<i>Anemone nemorosa</i>	Wood Anemone	White	March	May	Hedgerow, Woodland	Less than 30cm	Perennial	Low Growing	Shade to Semi Shade	Neutral to Calcareous		
<i>Angelica sylvestris</i>	Wild Angelica	White/Pink	July	September	Wet Grassland, Wet Woodland	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Anthemis arvensis</i>	Corn Chamomile	White	June	July	Arable, Brownfield	up to 45cm	Annual	Upright	Full Sun	Wide Range		
<i>Anthriscus sylvestris</i>	Cow Parsley	White	April	June	Grassland, Hedgerow, Woodland	60-150cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Anthyllis vulneraria</i>	Kidney Vetch	Yellow	June	September	Grassland, Maritime Grassland & Cliff, Saltmarsh	20-50cm	Perennial	Mound forming	Full Sun to Semi Shade	Acid to Neutral		Small Blue
<i>Aquilegia vulgaris</i>	Columbine	Blue	May	July	Hedgerow, Wet Grassland, Woodland	up to 60cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Armeria maritima ssp. Maritima</i>	Thrift	Pink	April	October	Maritime Grassland & Cliff, Saltmarsh	5-30cm	Perennial	Mound forming	Full Sun to Semi Shade	Acid to Neutral		
<i>Bellis perennis</i>	Common (Lawn) Daisy	White	March	October	Grassland	3-12cm	Perennial	Low Growing	Full Sun	Wide Range		
<i>Blackstonia perfoliata</i>	Yellow Wort	Yellow	June	October	Brownfield, Dry Grassland	15-40cm	Annual	Upright	Full Sun	Calcareous		
<i>Calluna vulgaris</i>	Heather	Pink/Purple	July	September	Bog/Fen/Marsh, Heathland	20-80cm	Perennial/Shrub	Mound forming	Full Sun to Semi Shade	Acid		Silver-Studded Blue
<i>Campanula glomerata</i>	Clustered Bellflower	Purple	July	October	Dry Grassland	15-30cm	Perennial	Upright	Full Sun	Calcareous		
<i>Campanula rotundifolia</i>	Harebell	Purple	July	September	Dry Grassland, Heathland	15-40cm	Perennial	Low Growing	Full Sun	Wide Range		Northern Rustic Moth



PPF - Perfect for Pollinators
Plants on this list agreed by
RHS as perfect for pollinators



WILDFLOWERS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Campanula trachelium</i>	Nettle Leaved Bellflower	Purple	July	September	Hedgerow, Woodland	40-80cm	Perennial	Upright	Shade to Semi Shade	Calcareous		
<i>Cardamine pratensis</i>	Cuckooflower/Ladies Smock	Light Pink	April	June	Wetland, Wet Woodland	up to 60cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Green Veined White, Orange Tip
<i>Centaurea cyanus</i>	Cornflower	Blue	June	August	Arable, Brownfield, Grassland	30-70cm	Annual	Upright	Full Sun	Wide Range		
<i>Centaurea nigra</i>	Common Knapweed	Purple	June	September	Brownfield, Grassland	50-100cm	Perennial	Upright	Full Sun	Neutral to Calcareous		
<i>Centaurea scabiosa</i>	Greater Knapweed	Pink/Purple	July	September	Dry Grassland, Grassland, Hedgerow	up to 120cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Centaureum erythraea</i>	Common Centaury	Pink	June	September	Dry Grassland	10-40cm	Biennial	Upright	Full Sun	Wide Range		
<i>Chamerion angustifolium</i>	Rosebay Willowherd	Pink	June	September	Brownfield, Hedgerow	80-150cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Cichorium intybus</i>	Chicory	Blue	July	October	Arable, Grassland	60-100cm	Perennial	Upright	Full Sun	Calcareous		
<i>Circaea lutetiana</i>	Enchanters Nightshade	White/Pink	June	August	Hedgerow, Wet Woodland, Woodland	20-70cm	Perennial	Upright	Shade	Neutral to Calcareous		
<i>Clinopodium vulgare</i>	Wild Basil	Pink	July	September	Dry Grassland, Grassland, Hedgerow	40-75cm	Perennial	Upright	Full Sun to Semi Shade	Calcareous		
<i>Conopodium majus</i>	Pignut	White	May	July	Grassland, Hedgerow	30-50cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Convallaria majalis</i>	Lily of the Valley	White	May	June	Dry Grassland, Grassland, Hedgerow, Woodland	15-25cm	Perennial/ Bulb	Upright	Shade to Semi Shade	Wide Range		
<i>Crithmum maritimum</i>	Rock Samphire	Yellow	June	August	Maritime Grassland & Cliff, Shingle	20-50cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Daucus carota</i>	Wild Carrot	White	June	August	Grasslands, Maritime Grassland & Cliff	up to 100cm	Biennial	Upright	Full Sun	Wide Range		
<i>Digitalis purpurea</i>	Foxglove	Purple	June	September	Brownfield, Hedgerow, Woodland	up to 150cm	Biennial	Upright	Shade to Semi Shade	Acid to Neutral		
<i>Dipsacus fullonum</i>	Teasel	Purple	July	September	Grassland, Hedgerow, Woodland	up to 200cm	Biennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Dipsacus pilosus</i>	Small Teasel	White/Pink	July	September	Hedgerow, Wet Woodland	up to 120cm	Biennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Echium vulgare</i>	Viper's Bugloss	Blue	June	September	Brownfield, Dry Grassland, Dunes	50-100cm	Biennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Epilobium hirsutum</i>	Great Willow Herb	Pink	June	September	Bog/Fen/Marsh, Wet Woodland	80-150cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Elephant Hawk-moth
<i>Erigoron acer</i>	Blue Fleabane	Pink	July	August	Brownfield, Dry Grassland	8-40cm	Annual/ Biennial	Upright	Full Sun	Neutral to Calcareous		



WILDFLOWERS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Eupatorium cannabinum</i>	Hemp Agrimony	Pink	July	September	Bog/Fen/Marsh, Wet Woodland	up to 120cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Filipendula ulmaria</i>	Meadowsweet	White	June	August	Bog/Fen/Marsh, Wet Woodland	60-120cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Fragaria vesca</i>	Wild Strawberry	White	April	July	Brownfield, Hedgerow, Woodland	5-30cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		Grizzled Skipper
<i>Fritillaria meleagris</i>	Snake's head fritillary	White/ Purple	April	May	Wet Grassland	30-50cm	Perennial/ Bulb	Upright	Full Sun	Neutral		
<i>Galanthus nivalis</i>	Snowdrop	White	January	March	Grassland, Hedgerow, Woodland	15-25cm	Perennial/ Bulb	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Galium album</i>	Hedge Bedstraw	White	June	September	Dry Grassland, Hedgerow, Woodland	40-150cm	Perennial	Scrambling	Full Sun to Semi Shade	Calcareous		
<i>Galium odoratum</i>	Sweet Woodruff	White	May	June	Hedgerow, Woodland	15-30cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Galium palustre</i>	Marsh Bedstraw	White	June	August	Bog/Fen/Marsh, Wet Grassland	up to 100cm	Perennial	Scrambling	Full Sun to Semi Shade	Acid to Neutral		
<i>Galium verum</i>	Lady's Bedstraw	Yellow	June	September	Dry Grassland, Maritime Grassland & Cliff	20-80cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		Bedstraw Hawk-moth, Striped Hawk-moth, Elephant Hawk-moth
<i>Geranium pratense</i>	Field Geranium/Meadow Cranesbill	Blue	June	September	Grassland, Hedgerow	60-100cm	Perennial	Mound forming	Full Sun	Wide Range		Brown Argus, Geranium Bronze
<i>Geranium robertianum</i>	Herb Robert	Pink	May	September	Brownfield, Hedgerow, Woodland	up to 60cm	Annual/ Biennial	Low Growing	Shade to Semi Shade	Wide Range		Geranium Bronze
<i>Geum urbanum</i>	Wood Avens	Yellow	May	September	Hedgerow, Woodland	up to 60cm	Perennial	Upright	Shade to Semi Shade	Wide Range		Grizzled Skipper
<i>Glaucium flavum</i>	Yellow Horned Poppy	Yellow	June	September	Brownfield, Maritime Grassland & Cliff, Shingle	50-90cm	Biennial/ Perennial	Upright	Full Sun	Wide Range		
<i>Glechoma hederacea</i>	Ground Ivy/Flowering Ivy	Purple	March	June	Brownfield, Hedgerow, Woodland	10-30cm	Perennial	Prostrate	Shade to Semi Shade	Wide Range		
<i>Helianthemum nummularium</i>	Common Rock Rose	Yellow	June	September	Grassland, Hedgerow	5-30cm	Perennial/ Shrub	Prostrate	Full Sun	Calcareous		Brown Argus, Green Hairstreak, Silver-Studded Blue
<i>Hippocrepis comosa</i>	Horseshoe Vetch	Yellow	May	July	Dry Grassland, Wall/Cliff/Rock	15-30cm	Perennial	Prostrate	Full Sun	Calcareous		Adonis Blue, Berger's Clouded Yellow, Chalkhill Blue, Silver-Studded Blue
<i>Hyacinthoides non-scripta</i>	Bluebell	Blue	April	June	Hedgerow, Wet Grassland, Woodland	20-50cm	Perennial/ Bulb	Upright	Shade to Semi Shade	Acid to Neutral		
<i>Hypericum hirsutum</i>	Hairy St. John's Wort	Yellow	July	September	Hedgerow, Wet Grassland, Woodland	up to 100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		



PFP - Perfect for Pollinators
Plants on this list agreed by
RHS as perfect for pollinators



WILDFLOWERS

Plant Name		Flowering Period			Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PFP	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Hypericum perforatum</i>	Perforate (Common) St. John's Wort	Yellow	May	September	Dry Grassland, Hedgerow, Woodland	30-90cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Hypericum tetrapterum</i>	Square Stemmed St. John's Wort	Yellow	June	September	Bog/Fen/Marsh, Wet Grassland	up to 60cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Hypochaeris radicata</i>	Catsear	Yellow	June	September	Brownfield, Grassland	20-60cm	Perennial	Upright	Full Sun	Acid to Neutral		
<i>Iris foetidissima</i>	Stinking iris	Purple	May	July	Hedgerow, Woodland, Maritime Grassland & Cliff	40-70cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Knautia arvensis</i>	Field Scabious	Purple	July	September	Dry Grassland, Hedgerow	50-100cm	Perennial	Upright	Full Sun	Neutral to Calcareous		Marsh Fritillary
<i>Lamium galeobdolon</i>	Yellow Archangel	Yellow	April	June	Hedgerow, Woodland	20-60cm	Perennial	Low Growing	Shade to Semi Shade	Wide Range		
<i>Lamium album</i>	White Dead Nettle	White	April	November	Brownfield, Hedgerow, Woodland	20-60cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Lathyrus pratensis</i>	Meadow Vetchling	Yellow	May	August	Grassland, Hedgerow	30-120cm	Perennial	Scrambling	Full Sun	Neutral to Calcareous		Real's Wood White, Wood White
<i>Leontodon hispidus</i>	Rough Hawkbit	Yellow	June	October	Grassland	up to 60cm	Perennial	Upright	Full Sun	Neutral to Calcareous		
<i>Leucanthemum vulgare</i>	Oxeye Daisy	White	May	September	Brownfield, Grassland	20-70cm	Perennial	Upright	Full Sun	Neutral to Calcareous		
<i>Linaria vulgaris</i>	Common (Yellow) Toadflax	Yellow	July	October	Brownfield, Grassland	30-80cm	Perennial	Upright	Full Sun	Wide Range		
<i>Lotus corniculatus</i>	Common Birdsfoot Trefoil	Yellow	June	September	Dry Grassland	10-40cm	Perennial	Prostrate	Full Sun	Wide Range		Common Blue, Dingy Skipper, Green Hairstreak, Grizzled Skipper, Mother Shipton Moth, Real's Wood White, Short Tailed Blue, Silver-Studded Blue, Six Spot Burnet Moth, Wood White
<i>Lotus pendunculatus</i>	Greater Birdsfoot Trefoil	Yellow	June	August	Bog/Fen/Marsh, Wet Grassland	up to 60cm	Perennial	Prostrate	Full Sun to Semi Shade	Wide Range		Real's Wood White, Six Spot Burnet Moth, Wood White
<i>Luzula sylvatica</i>	Great Wood Rush	Brown	April	June	Bog/Fen/Marsh, Wet Woodland	up to 80cm	Perennial	Upright	Shade to Semi Shade	Acid		
<i>Lycopus europaeus</i>	Gypsywort	White	June	September	Canal/Ditch/Lake/Pond, Wetland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Lysimachia nummularia</i>	Creeping Jenny	Yellow	June	August	Wet Grassland, Wet Woodland	up to 10cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Malva moschata</i>	Musk Mallow	Pink	July	August	Dry Grassland, Hedgerow	50-80cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		



WILDFLOWERS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Malva sylvestris</i>	Common Mallow	Pink	June	September	Arable, Brownfield, Hedgerow	50-100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Matricaria recutita</i>	Scented Mayweed	White	May	September	Arable, Brownfield	10-50cm	Perennial	Upright	Full Sun	Wide Range		
<i>Meconopsis cambrica</i>	Welsh Poppy	Yellow	June	August	Hedgerow, Woodland	40-60cm	Perennial	Upright	Shade to Semi Shade	Wide Range		
<i>Medicago lupulina</i>	Black Medick	Yellow	April	August	Brownfield, Grassland	10-50cm	Perennial	Prostrate	Full Sun	Neutral to Calcareous		Mother Shipton Moth
<i>Mercurialis perennis</i>	Dog's Mercury	Green	February	April	Hedgerow, Woodland	15-40cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Myosotis arvensis</i>	Field Forget-me-not	Blue	April	October	Arable, Brownfield, Dry Grassland, Hedgerow	15-40cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Myosotis sylvatica</i>	Wood Forget-me-not	Blue	April	July	Hedgerow, Woodland	20-50cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		
<i>Narcissus pseudonarcissus</i>	Daffodil	Yellow	March	May	Grassland, Woodland	30-50cm	Perennial/ Bulb	Upright	Shade to Semi Shade	Wide Range		
<i>Ononis repens</i>	Common Restharrow	Pink	June	September	Grassland, Scrub	30-60cm	Perennial	Prostrate	Full Sun	Neutral to Calcareous		
<i>Ononis spinosa</i>	Spiny Restharrow	Purple	June	September	Grassland, Wet Grassland	up to 70cm	Perennial	Upright	Full Sun	Calcareous		
<i>Origanum vulgare</i>	Wild Marjoram	Pink	July	September	Dry Grassland, Hedgerow	30-60cm	Perennial	Upright	Full Sun to Semi Shade	Calcareous		
<i>Papaver rhoeas</i>	Common Poppy	Red	June	August	Arable, Brownfield	30-60cm	Annual	Upright	Full Sun	Neutral to Calcareous		
<i>Peucedanum officinale</i>	Hog's Fennel	Yellow	July	September	Estuary	up to 200cm	Perennial	Upright	Full Sun	Wide Range		Fishers Estuarine Moth
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed	Yellow	May	August	Cliff/Rock/Wall, Dry Grassland, Heathland	5-30cm	Perennial	Upright	Full Sun	Wide Range		
<i>Pimpinella major</i>	Great Burnet Saxifrage	White	June	July	Grassland, Hedgerow	50-120cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Pimpinella saxifraga</i>	Burnet Saxifrage	White	June	September	Grassland	up to 60cm	Perennial	Upright	Full Sun	Neutral to Calcareous		
<i>Plantago coronopus</i>	Buck's-horn Plantain	Yellow	May	September	Dry Grassland, Maritime Grassland & Cliff	10-30cm	Perennial	Low Growing	Full Sun	Wide Range		
<i>Plantago lanceolata</i>	Ribwort Plantain	Brown/ White	April	October	Brownfield, Grassland	10-50cm	Perennial	Low Growing	Full Sun	Wide Range		Glanville Fritillary, Heath Fritillary
<i>Plantago major</i>	Greater Plantain		June	October	Brownfield, Grassland	10-50cm	Perennial	Low Growing	Full Sun	Wide Range		
<i>Plantago media</i>	Hoary Plantain	White/Pink	May	September	Grassland	10-40cm	Perennial	Low Growing	Full Sun	Neutral to Calcareous		



PFP - Perfect for Pollinators
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WILDFLOWERS

Plant Name		Flowering Period			Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PFP	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Potentilla anserina</i>	Silverweed	Yellow	June	August	Brownfield, Grassland	5-20cm	Perennial	Prostrate	Full Sun	Wide Range		
<i>Potentilla erecta</i>	Tormentil	Yellow	May	September	Grassland, Hedgerow, Woodland	up to 10cm	Perennial	Scrambling	Full Sun to Semi Shade	Acid to Neutral		Grizzled Skipper
<i>Potentilla reptans</i>	Creeping Cinquefoil	Yellow	June	September	Brownfield, Grassland, Hedgerow, Woodland	up to 10cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		Grizzled Skipper
<i>Poterium sanguisorba ssp. Sanguisorba</i>	Salad Burnet	Red	May	August	Grassland	20-50cm	Perennial	Low Growing	Full Sun	Neutral to Calcareous		Grizzled Skipper
<i>Primula veris</i>	Cowslip	Yellow	April	May	Grassland, Woodland	less than 15cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Duke of Burgundy
<i>Primula vulgaris</i>	Primrose	Yellow	March	June	Grassland, Hedgerow, Woodland	8-15cm	Perennial	Upright	Shade to Semi Shade	Wide Range		Duke of Burgundy
<i>Prunella vulgaris</i>	Sefheal	Purple	June	October	Brownfield, Grassland	up to 20cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Pulicaria dysenterica</i>	Common fleabane	Yellow	August	September	Bog/Fen/ Marsh, Hedgerow, Woodland	20-60cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Ranunculus acris</i>	Meadow Buttercup	Yellow	May	August	Grassland	20-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	Yellow	April	June	Dry Grassland	15-40cm	Perennial	Low Growing	Full Sun	Neutral to Calcareous		
<i>Ranunculus ficaria</i>	Lesser Celandine	Yellow	March	May	Grassland, Hedgerow, Woodland	up to 20cm	Perennial	Low Growing	Shade to Semi Shade	Neutral to Calcareous		
<i>Ranunculus repens</i>	Creeping Buttercup	Yellow	May	August	Grassland, Hedgerow, Woodland	up to 60cm	Perennial	Prostrate	Full Sun to Semi Shade	Wide Range		
<i>Ranunculus sceleratus</i>	Celery-Leaved Buttercup	Yellow	May	September	Bog/Fen/Marsh, Slow Moving Water	20-60cm	Annual	Upright	Shade to Semi Shade	Wide Range		
<i>Reseda lutea</i>	Wild Mignonette/Weld	Green	June	September	Brownfield, Grassland	30-75cm	Biennial	Upright	Full Sun to Semi Shade	Calcareous		
<i>Rhianthus minor</i>	Yellow Rattle	Yellow	May	August	Brownfield, Grassland	up to 50cm	Annual	Upright	Full Sun	Acid to Neutral		
<i>Rumex acetosa</i>	Common Sorrel	Red	May	June	Grassland, Woodland	30-80cm	Perennial	Prostrate	Full Sun	Neutral		Small Copper
<i>Rumex acetosella</i>	Sheep's Sorrel	Red	May	August	Grassland, Hedgerow, Woodland	30-80cm	Perennial	Prostrate	Full Sun	Acid to Neutral		Small Copper
<i>Rumex sanguineus</i>	Wood Dock	Red	June	August	Brownfield, Hedgerow, Woodland	up to 100cm	Perennial	Upright	Shade to Semi Shade	Neutral to Calcareous		Small Copper, Striped Hawk-moth
<i>Sanguisorba officinalis</i>	Great Burnet	Purple	June	September	Bog/Fen/Marsh, Wet Grassland	up to 100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Saponaria officinalis</i>	Soapwort	Light Pink	July	September	Cliff/Rock/Wall, Hedgerow, Woodland	30-90cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		



WILDFLOWERS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Scabiosa columbaria</i>	Small scabious	Blue	July	September	Grassland, Hedgerow	15-70cm	Perennial	Upright	Full Sun to Semi Shade	Calcareous		Marsh Fritillary
<i>Scorzonoides autumnalis</i>	Autumn Hawkbit	Yellow	June	October	Grassland	up to 60cm	Perennial	Upright	Full Sun	Acid to Neutral		
<i>Scutellaria galericulata</i>	Skullcap	Blue	July	October	Wetland, Wet Woodland	10-20cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		
<i>Sedum acre</i>	Biting Stonecrop	Yellow	July	August	Cliff/Rock/Wall, Maritime Grassland	2-10cm	Evergreen	Prostrate	Full Sun	Wide Range		Apollo, Northern Rustic Moth
<i>Sedum album</i>	White Stonecrop	White	June	August	Cliff/Rock/Wall, Shingle	7-15cm	Evergreen	Prostrate	Full Sun	Wide Range		Apollo, Northern Rustic Moth
<i>Silene dioica</i>	Red Campion	Pink	April	July	Grassland, Hedgerow, Woodland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Silene flos-cuculi</i>	Ragged Robin	Pink	May	August	Bog/Fen/Marsh, Wet Grassland	30-90cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Silene latifolia ssp alba</i>	White Campion	White	May	October	Grassland, Hedgerow, Woodland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Silene uniflora</i>	Sea Campion	White	June	August	Maritime Grassland & Cliff, Shingle	8-25cm	Perennial	Low Growing	Full Sun	Wide Range		
<i>Silene vulgaris</i>	Bladder Campion	White	June	August	Brownfield, Grassland	25-90cm	Perennial	Upright	Full Sun	Wide Range		
<i>Stachys officinalis</i>	Betony	Purple	July	September	Grassland, Hedgerow, Woodland	10-60cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Stachys sylvatica</i>	Hedge Woundwort	Red	July	September	Grassland, Hedgerow, Woodland	30-80cm	Perennial	Upright	Shade to Semi Shade	Wide Range		
<i>Stellaria graminea</i>	Lesser Stitchwort	White	May	August	Grassland, Hedgerow, Woodland	15-60cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Stellaria holostea</i>	Greater Stitchwort	White	April	June	Grassland, Hedgerow, Woodland	15-60cm	Perennial	Upright	Shade to Semi Shade	Wide Range		
<i>Succisa pratensis</i>	Devil's-bit Scabious	Blue	June	October	Grassland, Hedgerow, Woodland	30-70cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marsh Fritillary
<i>Symphytum officinale</i>	Common Comfrey	Blue	May	June	Bog/Fen/Marsh, Wet Woodland	up to 150cm	Perennial	Upright	Shade to Semi Shade	Wide Range		
<i>Tanacetum vulgare</i>	Tansy	Yellow	July	October	Brownfield, Hedgerow	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Teucrium scorodonia</i>	Woodsage	Green	July	September	Grassland, Hedgerow, Woodland	15-60cm	Perennial	Upright	Shade to Semi Shade	Wide Range		
<i>Thalictrum flavum</i>	Meadow Rue	White	July	August	Wetland, Wet Grassland	50-100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Thymus polytrichus</i>	Wild Thyme	Purple	May	August	Dry Grassland, Heathland	up to 10cm	Perennial	Prostrate	Full Sun	Neutral to Calcareous		Large Blue



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WILDFLOWERS

Plant Name		Flowering Period			Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Torilis japonica</i>	Upright Hedge Parsley	White	June	August	Grassland, Hedgerow, Woodland	60-100cm	Annual	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Tragopogon pratensis</i>	Goatsbeard	Yellow	May	July	Grassland, Hedgerow	30-10cm	Biennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Trifolium dubium</i>	Lesser Trefoil	Yellow	May	September	Grassland, Hedgerow	10-30cm	Annual	Low Growing	Full Sun to Semi Shade	Wide Range		
<i>Trifolium pratense</i>	Red Clover	Purple	May	September	Brownfield, Grassland	10-40cm	Perennial	Upright	Full Sun	Wide Range		Clouded Yellow, Mother Shipton Moth, Pale Clouded Yellow
<i>Trifolium repens</i>	White Clover	White	June	September	Arable, Grassland	up to 20cm	Perennial	Prostrate	Full Sun	Wide Range		Clouded Yellow, Mother Shipton Moth, Pale Clouded Yellow
<i>Valeriana officinalis</i>	Common Valerian	Light Pink	June	August	Bog/Fen/Marsh, Grassland	30-120cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Veronica chamaedrys</i>	Germander Speedwell	Blue	March	July	Grassland, Hedgerow, Woodland	up to 20cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Heath Fritillary
<i>Veronica officinalis</i>	Heath Speedwell	Purple	May	August	Grassland, Heathland	2cm	Perennial	Prostrate	Full Sun to Semi Shade	Acid		
<i>Vicia cracca</i>	Tufted Vetch	Purple	June	August	Grassland, Hedgerow, Woodland	60-200cm	Perennial	Scrambling	Full Sun to Semi Shade	Wide Range		Pea Moth, Real's Wood White, Short-Tailed Blue, Wood White
<i>Vicia sativa</i>	Common Vetch	Pink/Purple	May	September	Grassland, Hedgerow	15-40cm	Perennial	Scrambling	Full Sun to Semi Shade	Wide Range		Pea Moth
<i>Viola odorata</i>	Sweet Violet	Purple	March	May	Hedgerow, Woodland	2-20cm	Perennial	Low Growing	Shade to Semi Shade	Neutral to Calcareous		
<i>Viola palustris</i>	Marsh Violet	Purple	April	July	Bog/Fen/Marsh	5cm	Perennial	Low Growing	Full Sun	Acid		Dark Green Fritillary, Small Pearl-Bordered Fritillary
<i>Viola riviniana</i>	Dog Violet	Purple	March	October	Grassland, Hedgerow, Woodland	2-20cm	Perennial	Low Growing	Shade to Semi Shade	Wide Range		
<i>Viola tricolor</i>	Wild Pansy	Purple	April	September	Brownfield, Dry Grassland	2-20cm	Perennial	Low Growing	Full Sun to Semi Shade	Acid		



GRASSES & SEDGES

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PFP	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Agrostis capillaris</i>	Common Bent	White/Pink	June	August	Grassland, Hedgerow, Woodland	20-50cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		Gatekeeper, Meadow Brown, Small Heath, Wall
<i>Agrostis stolonifera</i>	Creeping Bent	Green	July	August	Arable, Grassland	up to 40cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Gatekeeper, Meadow Brown, Small Heath, Wall
<i>Alopecurus geniculatus</i>	Marsh Foxtail	Purple	June	August	Bog/Fen/Marsh, Wetland, Wet Grassland	20-60cm	Perennial	Upright	Full Sun	Wide Range		
<i>Alopecurus pratensis</i>	Meadow Foxtail	Green	April	June	Grassland, Hedgerow, Woodland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Ammophila arenaria</i>	Marram Grass	Yellow	June	August	Coastal Sand Dunes	50-120cm	Perennial	Upright	Full Sun	Wide Range		
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	Green	April	July	Grassland, Heathland	10-40cm	Perennial	Upright	Full Sun	Acid to Neutral		
<i>Arrhenatherum elatius</i>	False Oat Grass	Green	June	July	Grassland, Hedgerow	50-150cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Brachypodium sylvaticum</i>	Wood False Brome	Green	July	August	Hedgerow, Woodland	30-90cm	Perennial	Upright	Shade to Semi shade	Neutral to Calcareous		
<i>Briza media</i>	Quaking Grass	Green	June	July	Dry Grassland	15-40cm	Perennial	Upright	Full Sun	Wide Range		
<i>Bromus hordeaceus</i>	Soft Brome	Green	May	July	Arable, Brownfield, Grassland	10-100cm	Annual/ Biennial	Upright	Full Sun to Semi Shade	Neutral		
<i>Carex acuta</i>	Slender Tufted Sedge	Purple	June	July	Wetland, Wet Grassland	20-100cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Carex acutiformis</i>	Lesser Pond Sedge	Brown	July	September	Canal/Ditch/Lake/Pond, Slow Moving Water	60-150cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Calcareous		
<i>Carex arenaria</i>	Sand Sedge	Brown	June	July	Coastal, Dunes	Up to 50cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Carex divulsa</i>	Grey Sedge	Green	July	September	Wetland, Wet Woodland	25-80cm	Semi-Evergreen	Upright	Shade to Semi shade	Acid to Neutral		
<i>Carex elata</i>	Tufted Sedge	Brown	May	June	Bog/Fen/Marsh, Canal/Ditch/Lake/Pond	Up to 1.2m	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Carex flacca</i>	Glaucous Sedge		June	September	Bog/Fen/Marsh, Grassland	10-60cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Wide Range		
<i>Carex hirta</i>	Hairy Sedge	Green	June	September	Bog/Fen/Marsh, Hedgerow, Woodland	15-70cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Carex nigra</i>	Common Sedge	Green	June	August	Wetland, Wet Grassland	7-70cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Wide Range		
<i>Carex otrubae</i>	False Fox Sedge	Brown	July	August	Bog/Fen/Marsh, Saltmarsh	30-100cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Carex paniculata</i>	Greater Tussock Sedge	Brown	June	August	Wetland	60-150cm	Semi-Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		



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GRASSES & SEDGES

Plant Name		Flower Colour	Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Butterfly/ Moth Larval Foodplant
Scientific Name	Common Name		Start	Finish								
<i>Carex pendula</i>	Pendulous Sedge	Green	June	July	Wetland, Wet Woodland	60-180cm	Semi-Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		
<i>Carex pseudocyperus</i>	Cyperus Sedge	Green	July	August	Canal/Ditch/Lake/Pond, Wetland	40-90cm	Semi-Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		
<i>Carex riparia</i>	Greater Pond Sedge		May	August	Canal/Ditch/Lake/Pond, Slow Moving Water	60-150cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Carex rostrata</i>	Bottle Sedge	Brown	July	September	Bog/Fen/Marsh, Wetland	20-100cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Carex sylvatica</i>	Wood Sedge	Green	May	August	Wet Grassland, Wet Woodland	15-60cm	Semi-Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		
<i>Carex vulpina</i>	True Fox Sedge	Brown	July	August	Bog/Fen/Marsh, Wetland	30-100cm	Semi-Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Cynosurus cristatus</i>	Crested Dogs Tail	Green	June	August	Grassland, Hedgerow	15-60cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Dactylis glomerata</i>	Cocksfoot	Green	June	August	Grassland, Hedgerow, Woodland	up to 100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Essex Skipper, Large Skipper, Meadow Brown, Mother Shipton Moth, Ringlet, Speckled Wood, Wall
<i>Deschampsia cespitosa</i>	Tufted Hairgrass	Brown	June	August	Wet Grassland, Wet Woodland	20-120cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Ringlet
<i>Eriophorum angustifolium</i>	Cotton Grass	White	May	June	Bog/Fen/Marsh	20-60cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		
<i>Festuca ovina</i>	Sheep's Fescue	Green	May	June	Dry Grassland	5-40cm	Perennial	Mound Forming	Full Sun	Calcareous		Gatekeeper, Greyling, Meadow Brown, Marble Brown, Silver-Spotted Skipper, Small Heath
<i>Festuca rubra ssp rubra</i>	Streon Creeping Red Fescue	Green	May	July	Dry Grassland, Grassland	15-80cm	Perennial	Upright	Full Sun	Wide Range		Gatekeeper, Meadow Brown, Small Heath
<i>Holcus lanatus</i>	Yorkshire Fog	Light Pink	July	September	Grassland, Hedgerow, Woodland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Greyling, Marbled White, Small Skipper, Speckled Wood, Wall
<i>Luzula sylvatica</i>	Greater Wood Rush	Brown	May	June	Heathland, Wet Woodland	30-80cm	Perennial	Upright	Shade to Semi shade	Acid to Neutral		
<i>Phalaris arundinacea</i>	Reed Canary Grass	White/Pink	June	August	Slow Moving Water, Wetland	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		
<i>Phleum pratense</i>	Timothy		June	August	Grassland, Wet Grassland	up to 150cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		
<i>Poa trivialis</i>	Rough Stalked Meadow Grass	Green	June	July	Grassland, Hedgerow, Woodland	20-60cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Gatekeeper, Meadow Brown, Ringlet, Small Heath



MARGINALS & AQUATICS




Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Planting Zone
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Acorus calamus</i>	Sweet Flag	Green	May	July	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 100cm	Perennial	Upright	Full Sun	Neutral to Calcareous		Emergent
<i>Alisma plantago-aquatica</i>	Water Plantain	White	June	August	Canal/Ditch/Lake/ Pond, Wetland	20-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Angelica sylvestris</i>	Wild Angelica	White/Pink	June	September	Bog/Fen/Marsh, Canal/Ditch/Lake/ Pond	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Apium nodiflorum</i>	Fools Watercress	White	July	August	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 60cm	Perennial	Scrambling	Full Sun to Semi Shade	Neutral to Calcareous		Emergent
<i>Berula erecta</i>	Lesser Water Parsnip	White	July	September	Bog/Fen/Marsh, Canal/Ditch/Lake/ Pond	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Bolboschonus maritimus</i>	Sea Club Rush	Brown	July	August	Estuary, Saltmarsh	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Butomus umbellatus</i>	Flowering Rush	Pink	June	September	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 150cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Emergent
<i>Calla palustris</i>	Water Arum	White	May	June	Bog/Fen/Marsh, Canal/Ditch/Lake/ Pond	10-25cm	Perennial	Low Growing	Full Sun to Semi Shade	Acid to Neutral		
<i>Callitriche stagnalis</i>	Starwort	N/A	-	-	Canal/Ditch/Lake/ Pond, River	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Caltha palustris</i>	Marsh Marigold	Yellow	March	May	Bog/Fen/Marsh, Canal/Ditch/Lake/ Pond	up to 25cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Carex acuta</i>	Slender Tufted Sedge	Purple	June	July	Wetland, Wet Grassland	20-100cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Carex acutiformis</i>	Lesser Pond Sedge	Brown	July	September	Canal/Ditch/Lake/ Pond, Slow Moving Water	60-150cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Calcareous		Marginal
<i>Carex divulsa</i>	Grey Sedge	Green	July	September	Wetland, Wet Woodland	25-80cm	Semi- Evergreen	Upright	Shade to Semi shade	Acid to Neutral		Marginal
<i>Carex flacca</i>	Glaucous Sedge		June	September	Bog/Fen/Marsh, Grassland	10-60cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Carex hirta</i>	Hairy Sedge	Green	June	September	Bog/Fen/ Marsh, Hedgerow, Woodland	15-70cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Carex nigra</i>	Common Sedge	Green	June	August	Wetland, Wet Grassland	7-70cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Carex otrubae</i>	False Fox Sedge	Brown	July	August	Bog/Fen/Marsh, Saltmarsh	30-100cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Carex paniculata</i>	Greater Tussock Sedge	Brown	June	August	Wetland	60-150cm	Semi- Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		Marginal
<i>Carex pendula</i>	Pendulous Sedge	Green	June	July	Wetland, Wet Woodland	60-180cm	Semi- Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		Marginal
<i>Carex pseudocyperus</i>	Cyperus Sedge	Green	July	August	Canal/Ditch/Lake/ Pond, Wetland	40-90cm	Semi- Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		Marginal



PPF - Perfect for Pollinators
Plants on this list agreed by
RHS as perfect for pollinators





MARGINALS & AQUATICS

Plant Name		Flowering Period			Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Planting Zone
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Carex riparia</i>	Greater Pond Sedge		May	August	Canal/Ditch/Lake/ Pond, Slow Moving Water	60-150cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Carex rostrata</i>	Bottle Sedge	Brown	July	September	Bog/Fen/Marsh, Wetland	20-100cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Carex sylvatica</i>	Wood Sedge	Green	May	August	Wet Grassland, Wet Woodland	15-60cm	Semi- Evergreen	Upright	Shade to Semi shade	Neutral to Calcareous		Marginal
<i>Carex vulpina</i>	True Fox Sedge	Brown	July	August	Bog/Fen/Marsh, Wetland	30-100cm	Semi- Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Ceratophyllum demersum</i>	Rigid Hornwort	Pink/Purple	July	September	River	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Eleocharis palustris</i>	Common Spike Rush	Brown	May	July	Bog/Fen/Marsh, Canal/Ditch/Lake/ Pond	10-60cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Equisetum fluviatile</i>	Water Horsetail	Brown	June	July	Wetland, River	up to 150cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Eupatorium cannabinum</i>	Hemp Agrimony	Pink	July	September	Bog/Fen/Marsh, Wet Woodland	up to 120cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Filipendula ulmaria</i>	Meadowsweet	White	June	September	Bog/Fen/Marsh, Wet Woodland	up to 120cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Geum rivale</i>	Water Avens	Pink	May	September	Bog/Fen/Marsh, Wet Grassland	up to 50cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Glyceria fluitans</i>	Floating Sweet Grass	Green	May	August	Canal/Ditch/Lake/ Pond, Slow Moving Water	25-80cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Glyceria maxima</i>	Reed Sweet Grass	Green	July	August	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Hippuris vulgaris</i>	Mareostail	Green	June	July	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 50cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Hydrocharis morsus-ranae</i>	Frogbit	White	July	August	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 10cm	Perennial	Aquatic	Full Sun to Semi Shade	Neutral to Calcareous		Floating
<i>Hydrocotyle vulgaris</i>	Marsh Pennywort	Pink	June	August	Wetland	up to 10cm	Perennial	Prostrate	Full Sun to Semi Shade	Wide Range		Marginal
<i>Iris pseudacorus</i>	Yellow Flag Iris	Yellow	May	August	Canal/Ditch/Lake/ Pond, River	40-150cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Juncus acutiflorus</i>	Sharp Flowered Rush	Brown	July	September	Bog/Fen/Marsh, Wet Grassland	30-100cm	Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Juncus acutus</i>	Sharp Rush	Brown	June	July	Estuary, Saltmarsh	50-150cm	Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Juncus articulatus</i>	Jointed Rush	Brown	June	September	Bog/Fen/Marsh, Wet Grassland	up to 80cm	Evergreen	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Juncus effusus</i>	Soft Rush	Brown	June	August	Wetland, Wet Grassland	30-150cm	Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal



MARGINALS & AQUATICS

Plant Name			Flowering Period		Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PPF	Planting Zone
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Juncus inflexus</i>	Hard Rush	Brown	June	August	Wetland, Wet Grassland	25-60cm	Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Juncus maritimus</i>	Sea Rush	Brown	July	August	Estuary, Saltmarsh	30-100cm	Evergreen	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Lycopus europaeus</i>	Gypsywort	Purple	June	September	Canal/Ditch/Lake/Pond, Wetland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Lysimachia nummularia</i>	Creeping Jenny	Yellow	June	August	Wet Grassland, Wet Woodland	up to 10cm	Perennial	Prostrate	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Lysimachia vulgaris</i>	Yellow Loosestrife	Yellow	June	July	Canal/Ditch/Lake/Pond, Wetland	60-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Lythrum salicaria</i>	Purple Loosestrife	Pink/Purple	June	August	Bog/Fen/Marsh, Canal/Ditch/Lake/Pond	60-120cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Marginal
<i>Mentha aquatica</i>	Water Mint	Purple	July	October	Bog/Fen/Marsh, Canal/Ditch/Lake/Pond	15-60cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Menyanthes trifoliata</i>	Bog Bean	White	May	June	Canal/Ditch/Lake/Pond, Slow Moving Water	up to 15cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Floating
<i>Myosotis scorpioides</i>	Water Forget-me-not	Blue	May	September	Canal/Ditch/Lake/Pond, Slow Moving Water	15-30cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Myriophyllum spicatum</i>	Spiked Water Milfoil	N/A	-	-	River	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Nuphar lutea</i>	Brandy Bottle	Yellow	June	August	Canal/Ditch/Lake/Pond, Wetland	N/A	Perennial	Aquatic	Full Sun to Semi Shade	Wide Range		Floating
<i>Nymphaea alba</i>	White Water Lily	White	July	August	Canal/Ditch/Lake/Pond	N/A	Perennial	Aquatic	Full Sun to Semi Shade	Wide Range		Floating
<i>Nymphoides peltata</i>	Fringed Water Lily	Yellow	June	September	Slow Moving Water	N/A	Perennial	Aquatic	Full Sun to Semi Shade	Neutral to Calcareous		Floating
<i>Oenanthe aquatica</i>	Fine Leaved Water Dropwort	White	June	September	Canal/Ditch/Lake/Pond, River	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Oenanthe crocata</i>	Hemlock Water Dropwort	White	June	September	Canal/Ditch/Lake/Pond, Wet Woodland	up to 150cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Persicaria amphibia</i>	Amphibus Bistort	Pink	July	September	Canal/Ditch/Lake/Pond, Slow Moving Water	30-70cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Emergent
<i>Persicaria bistorta</i>	Common Bistort	Pink	June	August	Bog/Fen/Marsh, Hedgerow, Woodland	30-100cm	Perennial	Upright	Full Sun to Semi Shade	Acid to Neutral		Marginal
<i>Phalaris arundinacea</i>	Reed Canary Grass	White/Pink	June	August	Slow Moving Water, Wetland	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Phragmites australis</i>	Common Reed	Pink/Purple	August	October	Canal/Ditch/Lake/Pond, River	up to 350cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Phragmites australis (Saline)</i>	Common Reed (Saline)	Pink/Purple	August	October	Saltmarsh, Estuary	up to 350cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent



PFP - Perfect for Pollinators
Plants on this list agreed by
RHS as perfect for pollinators



MARGINALS & AQUATICS

Plant Name		Flowering Period			Habitat	Height (cm)	Growth Type	Growth Form	Position	Soil	PFP	Planting Zone
Scientific Name	Common Name	Flower Colour	Start	Finish								
<i>Potamogeton crispus</i>	Curled Pondweed	N/A	-	-	Canal/Ditch/Lake/ Pond, Slow Moving Water	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Potamogeton natans</i>	Broad Leaf Pondweed	N/A	-	-	Canal/Ditch/Lake/ Pond, Slow Moving Water	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Ranunculus aquatilis</i>	Common Water Crowfoot	White	April	August	River, Wetland	N/A	Perennial	Aquatic	N/A	Wide Range		Oxygenator
<i>Ranunculus flammula</i>	Lesser Spearwort	Yellow	June	October	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 50cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Ranunculus fluitans</i>	River Water Crowfoot	White	April	August	River, Wetland	N/A	Perennial	Prostrate	N/A	Calcareous		Oxygenator
<i>Ranunculus lingua</i>	Greater Spearwort	Yellow	June	September	Wetland, Wet Grassland	up to 100cm	Perennial	Upright	Full Sun	Neutral to Calcareous		Marginal
<i>Ranunculus sceleratus</i>	Celery-Leaved Buttercup	Yellow	May	September	Bog/Fen/Marsh, Slow Moving Water	20-60cm	Annual	Upright	Shade to Semi Shade	Wide Range		Marginal
<i>Rorippa nasturtium aquaticum</i>	Water Cress	White	May	October	River, Slow Moving Water	up to 20cm	Perennial	Prostrate	Full Sun to Semi Shade	Wide Range		Emergent
<i>Rumex hydrolapathum</i>	Water Dock	Green	July	September	Canal/Ditch/Lake/ Pond, Slow Moving Water	up to 200cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Sagittaria sagittifolia</i>	Arrowhead	White/Pink	June	August	Canal/Ditch/Lake/ Pond, Wetland	up to 80cm	Bulb	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Emergent
<i>Schoenoplectus lacustris</i>	Common Club Rush	Brown	June	August	Canal/Ditch/Lake/ Pond, River	up to 300cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Scrophularia auriculata</i>	Water Figwort	Red	June	September	Canal/Ditch/ Lake/Pond, Wet Woodland	40-80cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Scutellaria galericulata</i>	Skullcap	Blue	July	October	Wetland, Wet Woodland	10-20cm	Perennial	Low Growing	Full Sun to Semi Shade	Wide Range		Marginal
<i>Silene flos-cuculi</i>	Ragged Robin	Pink	May	August	Bog/Fen/Marsh, Wet Grassland	30-90cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Sparganium erectum</i>	Branched Bur Reed	Green	June	August	Canal/Ditch/Lake/ Pond, River	50-150cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Emergent
<i>Stachys palustris</i>	Marsh Woundwort	Pink	July	September	Wetland, Wet Grassland	30-80cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal
<i>Stratiotes aloides</i>	Water Soldiers	Whit	July	September	Canal/Ditch/Lake/ Pond	up to 10cm	Perennial	Floating	Full Sun	Calcareous		Oxygenator
<i>Typha angustifolia</i>	Lesser Reedmace	Brown	June	July	Canal/Ditch/Lake/ Pond, Estuary	150-250cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Emergent
<i>Typha latifolia</i>	Reedmace	Brown	June	July	Canal/Ditch/Lake/ Pond, Slow Moving Water	150-250cm	Perennial	Upright	Full Sun to Semi Shade	Neutral to Calcareous		Emergent
<i>Veronica beccabunga</i>	Brooklime	Blue	May	September	Canal/Ditch/Lake/ Pond, River	up to 30cm	Perennial	Upright	Full Sun to Semi Shade	Wide Range		Marginal

SEED MIXTURES



The following Seed Mixtures are bespoke blends of British Provenance seed specific to a variety of soil and environmental conditions. These mixes represent natural plant communities and have been developed over many years based on our experience in the field of habitat creation, ecology and horticulture.

BFS Seed Mixtures can be ordered as Grass & Wildflower Mixtures or as 100% wildflower mixtures and our technical team can advise you on the proportion of grasses to wildflowers required that is suitable for your specific project and site conditions. Our grass mixtures are developed in conjunction with the wildflower mixes and contain non-aggressive grasses specific to the indicated soil and environmental conditions. The standard blend includes 80% Grasses and 20% Wildflowers.



Percentages are for guidance and may vary subject to seed availability

BFS1 Traditional Hay Meadow Wildflower Mix



A traditional hay meadow conservation seed mix containing a high diversity of 26 UK native wildflowers and grasses. It is a seed mix suited for low fertility, moist, circumneutral and free draining moist soils that dry out in the summer. It is represented by the NVC community MG5 and is a habitat of principle importance 'Lowland Meadows'.

This type of meadow is managed traditionally by leaving the sward to flower and set seed from spring until early summer when a hay cut is taken to remove fertility and it is grazed thereafter. Light to moderate grazing can also be employed instead of a hay cut. Structural diversity such as tussocky grassland and taller herbs should be maintained on rotation by fencing off certain areas, which will benefit flowering species and the wildlife using these habitats. Hay meadow habitats are associated with high plant diversity, which provides a flower rich resource

for notable pollinators such as common and shrill carder bee in southern localities.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (19 species) Grasses 80% (7 species)

20% Wildflowers:

- **11%** *Prunella vulgaris* – (Selfheal)
- **10%** *Centaurea nigra* – (Black knapweed)
- **10%** *Plantago lanceolata* – (Ribwort plantain)
- **9%** *Galium verum* – (Lady's bedstraw)
- **9%** *Ranunculus acris* – (Meadow buttercup)
- **8%** *Leucanthemum vulgare* – (Ox-eye daisy)
- **6%** *Rumex acetosa* – (Common sorrel)
- **5%** *Lotus corniculatus* – (Common bird's-foot trefoil)
- **5%** *Rhinanthus minor* – (Yellow rattle)
- **4%** *Achillea millefolium* – (Yarrow)
- **4%** *Lathyrus pratensis* – (Meadow vetchling)
- **3%** *Hypochaeris radicata* – (Common cat's-ear)

- **3%** *Pimpinella saxifrage* – (Burnet saxifrage)
- **3%** *Sanguisorba officianlis* – (Great burnet)
- **3%** *Stachys officianlis* – (Betony)
- **2%** *Leontodon autumnalis* – (Autumn hawkbit)
- **2%** *Succisa pratensis* – (Devil's bit-scabious)
- **2%** *Vicia cracca* – (Tufted vetch)
- **1%** *Primula veris* – (Cowslip)

80% Grasses:

- **45%** *Festuca rubra* ssp *rubra* – (Red fescue)
- **25%** *Festuca rubra* ssp *litoralis* – (Slender Creeping Red Fescue)
- **20%** *Cynosurus cristatus* – (Crested dog's-tail)
- **3%** *Agrostis castellana* – (Common bent)
- **3%** *Trisetum flavescens* – (Yellow oat grass)
- **2.5%** *Anthoxanthum odoratum* – (Sweet vernal grass)
- **1.5%** *Briza media* – (Quaking grass)

BFS2 Acid Grassland Wildflower Mix for Sandy or Peaty Soils



This is a diverse conservation seed mix of sixteen UK native wildflowers and five grasses. Species adapted to base poor soils such as sheep's fescue, sheep's sorrel and heath bedstraw are frequent. It is seed mix suited for low fertility base poor (acidic) soils either on dry sandy soils or wetter peaty soils. It is represented by the NVC communities U1 to U5 and is a habitat of principle importance 'Lowland Dry Acid Grassland'.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (16 species) Grasses 80% (5 species)

20% Wildflowers:

- **14%** *Prunella vulgaris* – (Selfheal)

- **12%** *Centaurea nigra* – (Black knapweed)
- **12%** *Ranunculus acris* – (Meadow buttercup)
- **11%** *Galium verum* – (Lady's bedstraw)
- **11%** *Lotus corniculatus* – (Common bird's-foot trefoil)
- **9%** *Rumex acetosella* – (Sheep's sorrel)
- **7%** *Achillea millefolium* – (Yarrow)
- **6%** *Stachys officianlis* – (Betony)
- **5%** *Onobrychis vicifolia* – (Sainfoin)
- **5%** *Succisa pratensis* – (Devil's-bit scabious)
- **4%** *Hypochaeris radicata* – (Common cat's-ear)
- **1%** *Hieracium pilosella* – (Mouseear hawkweed)
- **1%** *Potentilla erecta* –

- (Tormentil)
- **1%** *Teucrium scorodonia* – (Wood sage)
- **0.5%** *Campanula rotundifolia* – (Harebell)
- **0.5%** *Galium saxatile* – (Heath bedstraw)

80% Grasses:

- **48%** *Festuca ovina* – (Sheep's fescue)
- **40%** *Cynosurus cristatus* – (Crested dog's-tail)
- **5%** *Agrostis capillaris* – (Common bent)
- **5%** *Anthoxanthum odoratum* – (Sweet vernal grass)
- **2%** *Deschampsia flexuosa* – (Wavy hair grass)

SEED MIXTURES

BFS3 Floodplain Meadow Grassland Mix



This is a highly diverse conservation seed mix of 32 UK native wildflowers and grasses. It is a seed mix suited for lowland seasonally flooded areas of low to moderate fertility. It is represented by the mesotrophic wet grassland NVC communities MG4, MG8 and MG9 and is a habitat of principle importance known as 'Lowland Meadows'. Floodplain meadows are often managed as traditional hay meadows so left ungrazed from spring and a hay cut is taken by mid July to remove fertility and grazed thereafter. Floodplain meadows often contain variation in field topography e.g ridge and furrow that allow a greater diversity of species to establish in different hydrological conditions.

Sowing Rate: 5g/m²

Contains: Wildflowers 20% (24 species) Grasses 80% (8 species)

20% Wildflowers:

- **8% *Plantago lanceolata*** – (Ribwort plantain)

- **8% *Ranunculus acris*** – (Meadow buttercup)
 - **7% *Leucanthemum vulgare*** – (Ox-eye daisy)
 - **7% *Prunella vulgaris*** – (Selfheal)
 - **6% *Centaurea nigra*** – (Black knapweed)
 - **6% *Trifolium pratense*** – (Red clover)
 - **5% *Filipendula ulmaria*** – (Meadowsweet)
 - **5% *Lotus corniculatus*** – (Common bird's-foot trefoil)
 - **5% *Rhinanthus minor*** – (Yellow rattle)
 - **4% *Leontodon autumnalis*** – (Autumn hawkbit)
 - **4% *Lotus pendunculatus*** – (Greater bird's-foot)
 - **4% *Rumex acetosa*** – (Common sorrel)
 - **4% *Sanguisorba officianlis*** – (Great burnet)
 - **3% *Achillea millefolium*** – (Yarrow)
 - **3% *Hypericum tetrapterum*** – (Square stemmed st john's-wort)
 - **3% *Hypochaeris radicata*** – (Common cat's-ear)
 - **3% *Lathyrus pratensis*** – (Meadow vetchling) trefoil)
 - **3% *Stachys officianlis*** – (Betony)
 - **3% *Succisa pratensis*** – (Devil's-bit scabious)
 - **2% *Lychnis flos-cuculi*** – (Ragged robin)
 - **2% *Primula veris*** – (Cowslip)
 - **2% *Silau silaus*** – (Pepper saxifrage)
 - **2% *Vicia cracca*** – (Tufted vetch)
 - **1% *Galium palustre*** – (Marsh bedstraw)
- 80% Grasses:**
- **45% *Festuca rubra* ssp. *rubra*** – (Red fescue)
 - **35% *Cynosurus cristatus*** – (Crested dog's-tail)
 - **5% *Holcus lanatus*** – (Yorkshire fog)
 - **4% *Anthoxanthum odoratum*** – (Sweet vernal grass)
 - **3% *Agrostis stolonifera*** – (Creeping bent)
 - **3% *Alopecurus pratensis*** – (Meadow foxtail)
 - **3% *Deschampsia cespitosa*** – (Tufted hair grass)
 - **2% *Alopecurus geniculatus*** – (Marsh foxtail)



Percentages are for guidance and may vary subject to seed availability

BFS4 Heavy Clay Soil Wildflower Mix



This mixture is composed of species that are adapted to growing on soils with high clay content. Clay soils are generally susceptible to waterlogging becoming sticky and heavy when wet, and prone to cracking in summer.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (18 species) Grasses 80% (7 species)

20% Wildflowers:

- **10%** *Rumex acetosa* – (Common Sorrel)
- **9%** *Plantago lanceolata* – (Ribwort Plantain)
- **8%** *Centaurea nigra* – (Black Knapweed)
- **8%** *Galium verum* – (Lady's Bedstraw)
- **8%** *Stachys officinalis* – (Betony)
- **8%** *Prunella vulgaris* –

- (Selfheal)
- **7%** *Ranunculus acris* – (Meadow Buttercup)
- **6%** *Dipsacus fullonum* – (Teasel)
- **6%** *Rhinanthus minor* – (Yellow Rattle)
- **5%** *Lotus corniculatus* – (Bird's-foot Trefoil)
- **4%** *Achillea millefolium* – (Yarrow)
- **4%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **4%** *Trifolium pratense* – (Red Clover, Native)
- **4%** *Vicia cracca* – (Tufted Vetch)
- **3%** *Lychnis flos-cuculi* – (Ragged Robin)
- **3%** *Silvaum silaus* – (Pepper Saxifrage)
- **2%** *Primula veris* – (Cowslip)
- **1%** *Verbascum Thapsus* – (Greater Mullein)

80% Grasses:

- **30%** *Cynosurus cristatus* – (Crested Dogstail)
- **30%** *Festuca rubra ssp litoralis* – (Slender CRF)
- **20%** *Festuca rubra ssp Commutata* – (Chewings Fescue)
- **10%** *Agrostis capillaris* – (Common Bent)
- **4%** *Alopecurus pratensis* – (Meadow Foxtail)
- **4%** *Deschampsia cespitosa* – (Tufted Hair Grass)
- **2%** *Anthoxanthum odoratum* – (Sweet Vernal Grass)

BFS5 Wetland & Pond Edge Wildflower Mix



A mixture of wildflowers and grasses suitable for sowing at the edges and wet margin of ponds, streams, lakes and ditches.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (21 species) Grasses 80% (6 species)

20% Wildflowers:

- **9%** *Filipendul ulmaria* – (Meadow Sweet)
- **8%** *Lotus pedunculatus* – (Greater Bird's-foot Trefoil)
- **8%** *Plantago lanceolata* – (Ribwort Plantain)
- **8%** *Prunella vulgaris* – (Selfheal)
- **8%** *Ranunculus acris* – (Meadow Buttercup)
- **8%** *Rhinanthus minor* – (Yellow Rattle)
- **8%** *Succisa pratensis* – (Devil's Bit Scabious)
- **6%** *Achillea ptarmica* – (Sneezewort)

- **5%** *Carex acutiformis* – (Lesser Pond Sedge)
- **5%** *Lychnis flos-cuculi* – (Ragged Robin)
- **4%** *Iris pseudacorus* – (Yellow Flag Iris)
- **4%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **4%** *Lythrum salicaria* – (Purple Loosestrife)
- **4%** *Lycopus europaeus* – (Gypsywort)
- **2%** *Caltha palustris* – (Marsh Marigold)
- **2%** *Hypericum tetrapterum* – (Square Stemmed St John's Wort)
- **2%** *Ranunculus flammula* – (Lesser Spearwort)
- **2%** *Scrophularia auriculata* – (Water Figwort)
- **1%** *Eupatorium cannabinium* – (Hemp Agrimony)
- **1%** *Juncus effusus* – (Soft Rush)
- **1%** *Pulicaria dysenterica* – (Fleabane)

80% Grasses:

- **40%** *Festuca rubra ssp litoralis* – (Slender CRF)
- **35%** *Cynosurus cristatus* – (Crested Dogstail)
- **12%** *Agrostis capillaris* – (Common Bent)
- **6%** *Alopecurus pratensis* – (Meadow Foxtail)
- **5%** *Deschampsia cespitosa* – (Tufted Hair Grass)
- **2%** *Anthoxanthum odoratum* – (Sweet Vernal Grass)

SEED MIXTURES

BFS6 Hedgerow & Shade Wildflower Mix



A mixture of grasses and perennial wildflowers that are tolerant of shade and semi-shade conditions. Suitable for sowing alongside hedges, under trees and within established woodland.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (22 species) Grasses 80% (9 species)

20% Wildflowers:

- **10%** *Agrimony eupatoria* – (Agrimony)
- **10%** *Centaurea nigra* – (Black Knapweed)
- **8%** *Digitalis purpurea* – (Foxglove)
- **8%** *Knautia arvensis* – (Field Scabious)
- **8%** *Prunella vulgaris* – (Selfheal)
- **8%** *Silene dioica* – (Red Campion)
- **7%** *Geum urbanum* – (Wood Avens)

- **6%** *Achillea millefolium* – (Yarrow)
- **6%** *Teucrium scorodonia* – (Wood Sage)
- **5%** *Stachys sylvatica* – (Hedge Woundwort)
- **4%** *Alliaria petiolata* – (Hedge Garlic)
- **4%** *Galium mollugo* – (Hedge Bedstraw)
- **4%** *Hypericum hirsutum* – (Hairy St John's Wort)
- **3%** *Campanula trachelium* – (Nettle Leaved Bellflower)
- **3%** *Torilis japonica* – (Upright Hedge Parsley)
- **2%** *Vicia sepium* – (Bush Vetch)
- **2%** *Vicia sylvatica* – (Wood Vetch)
- **2%** *Vicia sepium* – (Bush Vetch)
- **2%** *Vicia sylvatica* – (Wood Vetch)
- **1%** *Geranium pyrenaicum* – (Hedgerow Crane's-bill)
- **0.5%** *Arum maculatum* – (Lords-and-Ladies)

- **0.5%** *Verbascum thapsus* – (Greater Mullein)

80% Grasses:

- **30%** *Cynosurus cristatus* – (Crested Dogstail)
- **25%** *Festuca rubra* ssp *commutate* – (Chewings Fescue)
- **15%** *Festuca rubra* ssp *litoralis* – (Slender CRF)
- **10%** *Agrostis capillaris* – (Common Bent)
- **8%** *Poa nemoralis* – (Wood Meadow Grass)
- **5%** *Poa trivialis* – (Rough Meadow Grass)
- **4%** *Deschampsia cespitosa* – (Tufted Hair Grass)
- **2%** *Anthoxanthum odoratum* – (Sweet Vernal Grass)
- **1%** *Brachypodium sylvaticum* – (Wood False Brome)

BFS7 Calcareous Grassland Wildflower



This is a high diversity grassland seed mix of 30 UK native wildflowers and grasses. It is seed mix suited for low fertility base rich chalk and limestone soils that are dry and free draining and is represented by the NVC lowland calcareous grassland communities CG1 to CG7 but is largely based on the most common lowland calcareous grassland CG2.

This grassland mix represents the species present in the habitat of principle importance 'Lowland Calcareous Grassland'. Calcareous grasslands are normally low fertility habitats maintained through low to moderate grazing by cattle, sheep, horses or even rabbits! Depending on the fertility 1-3 cuts per year with a break in the peak flowering season can also maintain this sward.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (21 species) Grasses 80% (9 species)

20% Wildflowers:

- **9%** *Knautia arvensis* – (Field Scabious)
- **8%** *Galium verum* – (Lady's Bedstraw)
- **8%** *Prunella vulgaris* – (Selfheal)
- **7%** *Centaurea nigra* – (Black Knapweed)
- **7%** *Centaurea scabiosa* – (Greater Knapweed)
- **7%** *Ranunculus bulbosus* – (Bulbous Buttercup)
- **6%** *Daucus carota* – (Wild Carrot)
- **6%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **6%** *Lotus corniculatus* – (Common Birdsfoot Trefoil)
- **6%** *Plantago media* – (Hoary Plantain)
- **6%** *Ranunculus acris* – (Meadow Buttercup)
- **5%** *Achillea millefolium* – (Yarrow)
- **5%** *Sanguisorba minor* – (Salad Burnet)
- **3%** *Salvia verbenaca* – (Wild Clary)
- **3%** *Scabiosa columbaria* – (Small Scabious)

- **2%** *Filipendula vulgaris* – (Dropwort)
- **2%** *Leontodon hispidus* – (Rough Hawkbit)
- **1%** *Clinopodium vulgare* – (Wild Basil)
- **1%** *Origamum vulgare* – (Wild Marjoram)
- **1%** *Primula veris* – (Cowslip)
- **1%** *Reseda lutea* – (Wild Mignonette)

80% Grasses:

- **30%** *Festuca ovina* – (Sheep's Fescue)
- **28%** *Cynosurus cristatus* – (Crested Dogstail)
- **20%** *Festuca rubra* – (Red Fescue)
- **5%** *Bromus erectus* – (Upright Brome)
- **4%** *Agrostis capillaris* – (Common Bent)
- **4%** *Phleum bertolonii* – (Small Timothy)
- **4%** *Trisetum flavescens* – (Yellow Oat Grass)
- **3%** *Briza maxima* – (Quaking Grass)
- **2%** *Koeleria macrantha* – (Crested Hair-Grass)



Percentages are for guidance and may vary subject to seed availability

BFS8 High Nutrient Initial Establishment Wildflower Grassland Mix – 50% Flora



This mix is composed of those wildflowers tolerant of higher nutrient environments and grass competition as they can grow tall in the sward or scramble up grass stems e.g meadow vetchling. This mix should be sown with at least 50% wildflower content to allow wildflowers to establish.

It a colourful mix with a long flowering period that will provide a meadow wildlife habitat. Regular low intensity grazing or mowing in initial establishment period (4-6 years) and removing the cut material will help to reduce fertility. Higher diversity mixes could be established such as BFS 1 Traditional Hay Meadow Mix once the fertility is lowered through appropriate management.

Sowing Rate: 3g/m²

Contains: Wildflowers 50% (14 species) Grasses 50% (6 species)

50% Wildflowers:

- **10%** *Centaurea nigra* – (Black Knapweed)
- **10%** *Plantago lanceolata* – (Ribwort Plantain)
- **10%** *Ranunculus acris* – (Meadow Buttercup)
- **10%** *Rumex acetosa* – (Common Sorrel)
- **8%** *Lathyrus pratensis* – (Meadow Vetchling)
- **8%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **7%** *Sanguisorba minor* – (Salad Burnet)
- **7%** *Silene dioica* – (Red Campion)
- **6%** *Achillea millefolium* – (Yarrow)
- **6%** *Trifolium pratense* – (Red Clover)

- **5%** *Lotus corniculatus* – (Common Birdsfoot Trefoil)
- **5%** *Rhinanthus minor* – (Yellow Rattle)
- **4%** *Lychnis flos-cuculi* – (Ragged Robin)
- **4%** *Vicia cracca* – (Tufted Vetch)

50% Grasses:

- **40%** *Festuca rubra* – (Red Fescue)
- **25%** *Cynosurus cristatus* – (Crested Dogstail)
- **15%** *Festuca rubra* ssp. *commutata* – (Chewings Fescue)
- **10%** *Poa trivialis* – (Rough Meadow Grass)
- **5%** *Agrostis capillaris* – (Common Bent)
- **5%** *Anthoxanthum odoratum* – (Sweet Vernal Grass)



SEED MIXTURES

BFS9 Country Meadow Wildflower Mix



If you are trying to create an old English meadow then this general purpose perennial meadow mix will establish itself and come to full maturity over a 2 – 3 year period. This is a simple yet visually pleasing wildflower meadow seed mixture containing the more common native wildflower species along with (non-competitive) companion grasses. It can be used for amenity areas, large gardens and environmentally sensitive landscaping. If you want a more colourful instant impact then consider our Pure Flower Seed Mixtures or Urban Wildflower Mixtures

Sowing Rate: 5g/m²

Contains: Wildflowers 20% (15 species) Grasses 80% (5 species)

20% Wildflowers:

- **12%** *Galium verum* – (Lady's Bedstraw)
- **12%** *Sanguisorba minor* – (Salad Burnet)
- **9%** *Ranunculus acris* – (Meadow Buttercup)
- **8%** *Plantago lanceolata* – (Ribwort Plantain)
- **8%** *Prunella vulgaris* – (Selfheal)
- **8%** *Vicia sativa ssp. nigra* (Common Vetch)
- **7%** *Leucanthemum vulgare*– (Oxeye Daisy)
- **6%** *Centaurea nigra* – (Black Knapweed)
- **6%** *Medicago lupulina* – (Black Medick)
- **4%** *Achillea millefolium* – (Yarrow)
- **4%** *Daucus carota* – (Wild Carrot)
- **4%** *Hypericum perforatum* – (Perforate St John's Wort)
- **4%** *Lotus corniculatus* – (Birdsfoot Trefoil)

- **4%** *Malva moschata* – (Musk Mallow)
- **4%** *Silene alba* – (White Campion)

80% Grasses:

- **30%** *Festuca ovina* – (Sheep's Fescue)
- **25%** *Festuca rubra ssp. commutata* – (Chewings Fescue)
- **25%** *Festuca rubra ssp. litoralis* – (Slender CRF)
- **15%** *Cynosurus cristatus* – (Crested Dogstail)
- **5%** *Agrostis capillaris* – (Common Bent)

BFS10 Species Rich Wildflower Meadow Mix



This wildflower meadow seed mixture contains 25 different species of grasses and wildflowers for a greater variety. This seed mixture is suitable for all soil types and creates a varied habitat for insects and birds.

Sowing Rate: 5g/m²

Contains: Wildflowers 20% (20 species) Grasses 80% (5 species)

20% Wildflowers:

- **8%** *Centaurea nigra* – (Black Knapweed)
- **8%** *Galium verum* – (Lady's Bedstraw)
- **8%** *Prunella vulgaris* – (Selfheal)
- **8%** *Sanguisorba minor* – (Salad Burnet)
- **7%** *Knautia arvensis* – (Field Scabious)
- **6%** *Plantago lanceolata* – (Ribwort Plantain)
- **6%** *Ranunculus acris* – (Meadow Buttercup)

- **6%** *Rhinanthus minor* – (Yellow Rattle)
- **6%** *Silene alba* – (White Campion)
- **6%** *Vicia sativa ssp. nigra* – (Common Vetch)
- **5%** *Centaurea scabiosa* – (Greater Knapweed)
- **4%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **4%** *Lotus corniculatus* – (Bird's-foot Trefoil)
- **4%** *Medicago lupulina* – (Black Medick)
- **3%** *Achillea millefolium* – (Yarrow)
- **3%** *Daucus carota* – (Wild Carrot)
- **3%** *Malva moschata* – (Musk Mallow)
- **2%** *Hypericum perforatum* – (Perforate St John's Wort)
- **2%** *Primula veris* – (Cowslip)
- **1%** *Hypochaeris radicata* – (Cat's-ear)

80% Grasses:

- **30%** *Festuca ovina* – (Sheep's Fescue)
- **25%** *Festuca rubra ssp. commutata* – (Chewings Fescue)
- **25%** *Festuca rubra ssp. litoralis* – (Slender CRF)
- **15%** *Cynosurus cristatus* – (Crested Dogstail)
- **5%** *Agrostis castellana* – (Common Bent)



Percentages are for guidance and may vary subject to seed availability

BFS11 Coastal Meadow Grassland Mix



This is a conservation seed mix for coastal habitats containing 26 UK native wildflowers and 9 grasses. This mix is suited for low fertility soils near sea cliffs or shingle beaches that are subjected to salt spray. It is represented by the NVC maritime cliff communities MC1 to MC12 and the 'maritime, cliff and slope' habitat of principle importance. This is a low fertility sward on shallow soils and should not require intensive management. Coastal grassland can provide important foraging for Chough and provide microhabitats for rare invertebrates such as Glanville Fritillary

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (26 species) Grasses 80% (9 species)

20% Wildflowers:

- **10%** *Lotus Corniculatus* – (Bird's-Foot Trefoil)
- **8%** *Anthyllis vulnearia* – (Kidney Vetch)
- **8%** *Leucanthemum vulgare* – (Ox-Eye Daisy)

- **7%** *Daucus carota* – (Wild Carrot)
- **7%** *Galium verum* – (Lady's Bedstraw)
- **7%** *Prunella vulgaris* – (Selfheal)
- **7%** *Rumex acetosa* – (Common Sorrel)
- **5%** *Achillea millefolium* – (Yarrow)
- **5%** *Centaurea scabiosa* – (Greater Knapweed)
- **5%** *Plantago media* – (Hoary Plantain)
- **5%** *Sanguisorba minor* – (Salad Burnet)
- **4%** *Echium vulgare* – (Viper's Bugloss)
- **4%** *Silene vulgaris* – (Bladder Campion)
- **3%** *Linaria vulgaris* – (Yellow Toadflax)
- **3%** *Silene maritima* – (Sea Campion)
- **2%** *Hypericum perforatum* – (Perforate St John's Wort)
- **2%** *Hypochaeris radicata* – (Common Cat's-Ear)
- **2%** *Ononis repens* – (Common Restharrow)
- **1%** *Plantago coronopus* – (Buck's-Horn Plantain)
- **1%** *Plantago maritima* – (Sea Plantain)

- **1%** *Thymus praecox* – (Wild Thyme)
- **1%** *Tragopogon pratensis* – (Goat's Beard)
- **1%** *Tripleurospermum maritimum* – (Sea Mayweed)
- **0.5%** *Armeria maritima* – (Thrift)
- **0.25%** *Sedum album* – (Biting Stonecrop)
- **0.25%** *Sedum anglicum* – (English Stonecrop)

80% Grasses:

- **32%** *Cynosurus cristatus* – (Crested Dog's-Tail)
- **30%** *Festuca ovina* – (Sheep's Fescue)
- **25%** *Festuca rubra ssp rubra* – (Red Fescue)
- **4%** *Bromus erectus* – (Upright Brome)
- **4%** *Phleum bertolonii* – (Small Timothy)
- **2%** *Agrostis stolonifera* – (Creeping Bent)
- **1%** *Briza media* – (Quaking Grass)
- **1%** *Koeleria macrantha* – (Crested Hair Grass)
- **1%** *Trisetum flavescens* – (Yellow Oat Grass)

BFS11A Coastal Floodplain Grassland Meadow Mix



A seed mix containing 20 UK native wildflowers and grasses, for establishing grassland on seasonally inundated land bordering brackish ditches and streams close to the coast and on the upper saltmarsh. This is a low to moderate diversity grassland mix that is often used as grazing marsh. It represents the NVC communities MG11 and MG12 and the habitat of principle importance 'coastal floodplain grazing marsh'. Coastal grazing marsh has a short sward is ideal for breeding lapwings and also provides winter feeding grounds for wildfowl and waders.

Sowing Rate: 5g/m²
Contains: Wildflowers 20% (13 species) Grasses 80% (7 species)

20% Wildflowers:

- **17%** *Lotus corniculatus* – (Common Bird's-Foot Trefoil)
- **15%** *Plantago lanceolata* – (Ribwort Plantain)
- **13%** *Ranunculus acris* – (Meadow Buttercup)
- **12%** *Potentilla anserina* – (Silverweed)
- **9%** *Vicia cracca* – (Tufted Vetch)
- **8%** *Rumex acetosa* – (Common Sorrel)
- **7%** *Hypochaeris radicata* – (Common Cat's-Ear)
- **5%** *Ranunculus repens* – (Creeping Buttercup)
- **3%** *Carex otrubae* – (False Fox Sedge)
- **3%** *Leontodon autumnalis* – (Autumn Hawkbit)
- **3%** *Trifolium pratense* – (Red Clover)

- **3%** *Trifolium repens* – (White Clover)
- **2%** *Pulicaria dysenterica* – (Common Fleabane)

80% Grasses:

- **40%** *Festuca rubra ssp. rubra* – (Red Fescue)
- **32%** *Festuca arundinacea* – (Tall Fescue)
- **10%** *Holcus lanatus* – (Yorkshire Fog)
- **6%** *Festuca pratensis* – (Meadow Fescue)
- **5%** *Agrostis stolonifera* – (Creeping Bent)
- **4%** *Dactylis glomerata* – (Cocksfoot)
- **3%** *Alopecurus pratensis* – (Meadow Foxtail)

SEED MIXTURES

BFS12 Green Roof Wildflower Mix



This specially formulated seed mix contains a very high percentage of drought tolerant wildflower species (85%). Having only 3 species (15%) of attractive and slow growing grasses there is a very necessary reduction in maintenance and it looks pretty too!

We consider that this mixture consists of a more suitable ratio of grass to wildflowers for green roofs. The grasses are all slow growing – this again reduces the amount of maintenance required. The overall effect is a green roof that is much more picturesque and easy to look after with added benefits for insect life too!

Sowing Rate: 2g/m²
Contains: Wildflowers 85% (22 species) Grasses 15% (3 species)

85% Wildflowers:

- **8%** *Anthyllis vulnearia* – (Kidney vetch)
- **8%** *Galium verum* – (Lady's bedstraw)
- **7%** *Lotus corniculatus* – (Bird's-foot trefoil)
- **6%** *Agrimony eupatoria* – (Agrimony)
- **6%** *Prunella vulgaris* – (Selfheal)
- **6%** *Sanguisorba minor* – (Salad burnet)
- **5%** *Leontodon hispidus* – (Rough hawkbit)
- **5%** *Silene vulgaris* – (Bladder campion)
- **4%** *Daucus carota* – (Wild carrot)
- **4%** *Echium vulgare* – (Viper's bugloss)
- **4%** *Leucanthemum vulgare* – (Oxeye daisy)
- **3%** *Plantago media* – (Hoary plantain)
- **3%** *primula veris* – (Cowslip)
- **3%** *Trifolium pratense* – (Red clover)

- **3%** *Origamum vulgare* – (Wild marjoram)
- **2%** *Achillea millefolium* – (Yarrow)
- **2%** *Linaria vulgaris* – (Common toadflax)
- **2%** *Rumex acetosa* – (Common sorrel)
- **1%** *Hippocrepis comosa* – (Horseshoe vetch)
- **1%** *Hypericum perforatum* – (Perforate st. John's wort)
- **1%** *Scabiosa columbaria* – (Small scabious)
- **1%** *Thymus praecox* – (Wild thyme)

15% Grasses:

- **10%** *Cynosurus cristatus* – (Crested dog's-tail)
- **3%** *Anthoxanthum odoratum* – (Sweet vernal grass)
- **2%** *Briza media* – (Common quaking grass)

BFS13 Tussocky Grassland Wildflower Meadow Mix



The Tussocky Tall Grassland Mix contains a moderate diversity of fifteen wildflowers but the major component is coarse grasses that form tussocks, including Cocksfoot, Tall Fescue and Yorkshire Fog.

The grassland resembles the NVC habitat MG1 Grassland. It is suitable for moderate to high fertility circumneutral soils with low management inputs. Cutting once per year or even every other year in spring is often enough to maintain this sward. Maintaining areas of tussocky grassland and tall herbs after through rotational cutting will help to encourage small mammals populations and overwintering invertebrates. Ant mounds are often a major component of this type of habitat if left undisturbed which can help to attract Green Woodpeckers. The small mammals provide suitable foraging habitat for Barn Owls, a schedule 1 bird species.

Sowing Rate: 5g/m²

Contains: Wildflowers 20% (15 species) Grasses 80% (8 species)

20% Wildflowers:

- **10%** *Centaurea nigra* – (Black knapweed)
- **10%** *Leucanthemum vulgare* – (Ox-eye daisy)
- **10%** *Plantago lanceolata* – (Ribwort plantain)
- **10%** *Ranunculus acris* – (Meadow buttercup)
- **10%** *Rumex acetosa* – (Common sorrel)
- **10%** *Silene dioica* – (Red campion)
- **6%** *Achillea millefolium* – (Yarrow)
- **5%** *Lathyrus pratensis* – (Meadow vetchling)
- **5%** *Lotus uliginosus* – (Greater bird's-foot trefoil)
- **5%** *Trifolium pratense* – (Red clover)
- **4%** *Agrimony eupatoria* – (Common Agrimony)
- **4%** *Daucus carota* – (Wild Carrot)

- **4%** *Lynchnis flos-cuculi* – (Ragged robin)
- **4%** *Vicia cracca* – (Tufted vetch)
- **3%** *Knautia arvensis* – (Field Scabious)

80% Grasses:

- **25%** *Festuca arundinacea* – (Tall fescue)
- **25%** *Festuca pratensis* – (Meadow fescue)
- **20%** *Dactylis glomerata* – (Cock's-foot)
- **10%** *Festuca rubra ssp rubra* – (Red fescue)
- **8%** *Arrhenatherum elatius* – (False oat grass)
- **5%** *Holcus lanatus* – (Yorkshire fog)
- **4%** *Deschampsia cespitosa* – (Tufted hair grass)
- **3%** *Alopecurus pratensis* – (Meadow foxtail)



Percentages are for guidance and may vary subject to seed availability

BFS14 Brownfield Site Wildflower Mix (Open Mosaic Habitat On Previously Developed Land) – 80% Flora



This specially formulated seed mix contains a very high percentage of drought tolerant wildflower species (85%). Having only 2 species (15%) of attractive and slow growing grasses there is a very necessary reduction in maintenance and it looks pretty too!

We consider that this mixture consists of a more suitable ratio of grass to wildflowers for green roofs. The grasses are all slow growing – this again reduces the amount of maintenance required. The overall effect is a green roof that is much more picturesque and easy to look after with added benefits for insect life too!

Sowing Rate: 3g/m²

Contains: Wildflowers 80% (20 species) Grasses 20% (2 species)

80% Wildflowers:

- **9%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **8%** *Centaurea nigra* – (Black knapweed)
- **8%** *Medicago lupulina* – (Black medick)
- **7%** *Maticaria recutita* – (Scented mayweed)
- **6%** *Centaurea cyanus* – (Cornflower)
- **5%** *Daucus carota* – (Wild carrot)
- **5%** *Rumex acetosella* – (Sheep's sorrel)
- **5%** *Silene alba* – (White campion)
- **4%** *Lotus corniculatus* – (Common bird's-foot trefoil)
- **4%** *Silene vulgaris* – (Bladder campion)
- **3%** *Reseda luteola* – (Weld)
- **3%** *Trifolium pratense* – (Red clover)
- **2%** *Echium vulgare* – (Viper's bugloss)

- **2%** *Hypochaeris radicata* – (Common cat's-ear)
- **2%** *Linaria vulgaris* – (Common toadflax)
- **2%** *Trifolium arvense* – (Hare's-foot clover)
- **2%** *Vicia cracca* – (Tufted vetch)
- **1%** *Centaureum erythraea* – (Common centaury)
- **1%** *Hieracium pilosella* – (Mouse-ear hawkweed)
- **1%** *Hypericum perforatum* – (Common St John's Wort)

20% Grasses:

- **15%** *Festuca ovina* – (Sheep's fescue)
- **5%** *Festuca rubra ssp. rubra* – (Red fescue)



SEED MIXTURES

BFS110 Cornfield Annuals Wildflower Mix – 100% Flora



These produce a brilliant display of flowers in the first summer following sowing. The soil must be filled each autumn if they are to persist from year to year. Cornfield annuals can be sown alone, or add to a meadow or grass mixtures.

Sowing Rate: 2g/m²
Contains: Wildflowers 100% (6 species)

- **40%** *Agrostemma githago* – (Corn Cockle)
- **20%** *Centaurea cyanus* – (Cornflower)
- **15%** *Silene latifolia* – (White Champion)
- **10%** *Chrysanthemum segetum* – (Corn Marigold)
- **10%** *Papaver rhoeas* – (Corn Poppy)
- **5%** *Anthemis arvensis* – (Corn Chamomile)

BFS120 Wildlife Wildflower Mix For Bees, Birds & Butterflies - 100% Flora



This seed mixture is specifically designed to create a habitat in which wild birds, butterflies and beneficial insects can thrive. Plants which encourage insects and wild animals to feed or shelter are important to attract wildlife to your conservation area or garden.

Sowing Rate: 2g/m²
Contains: Wildflowers 100% (22 species)

- **8%** *Prunella vulgaris* – (Selfheal)
- **7%** *Knautia arvensis* – (Field Scabious)
- **6%** *Anthyllis vulnearia* – (Kidney Vetch)
- **6%** *Cichorium intybus* – (Chicory)
- **6%** *Echium vulgare* – (Viper's Bugloss)
- **6%** *Silene dioica* – (Red Champion)
- **5%** *Lotus corniculatus* – (Bird's-foot Trefoil)
- **5%** *Plantago lanceolata* – (Ribwort Plantain)
- **5%** *Silene alba* – (White Champion)
- **5%** *Trifolium pratense* – (Red Clover)
- **4%** *Agrimony eupatoria* – (Common Agrimony)
- **4%** *Centaurea nigra* – (Common Knapweed)
- **4%** *Centaurea scabiosa* – (Greater Knapweed)
- **4%** *Dipsacus fullonum* – (Wild Teasel)
- **4%** *Leucanthemum vulgare* – (Oxeye Daisy)
- **4%** *Scabiosa columbaria* – (Small Scabious)
- **4%** *Vicia cracca* – (Tufted Vetch)
- **3%** *Origanum vulgare* – (Wild Marjoram)
- **3%** *Reseda lutea* – (Wild Mignonette)
- **3%** *Rumex acetosa* – (Common Sorrel)
- **2%** *Galium verum* – (Lady's Bedstraw)
- **2%** *Succisa pratensis* – (Devil's-bit Scabious)



Percentages are for guidance and may vary subject to seed availability

BFS130 Flowering Grassless Lawn Wildflower Mix – 100% Flora



This flowering lawn is an attractive pure flower alternative to a taller wildflower meadow and is more wildlife friendly than a grass lawn. It contains 21 low growing creeping wildflower species, which can be mown regularly. The species have been selected that tolerate a wide range of soil types and semi-shade conditions. There are no grasses specified in this mix as it is an alternative to a grassy lawn and to allow the wildflowers to flourish. However grasses may creep in over time that can be hand weeded or left to mix in with the flowering species.

Sowing Rate: 2g/m²

Contains: Wildflowers 100% (21 species)

- **10%** *Lotus corniculatus* – (Bird's-Foot Trefoil)
- **9%** *Medicago lupulina* – (Black Medick)
- **9%** *Vicia sativa ssp nigra* – (Common Vetch)
- **8%** *Achillea millefolium* – (Yarrow)
- **8%** *Athemis arvensis* – (Corn Chamomile)
- **8%** *Galium verum* – (Lady's Bedstraw)
- **8%** *Prunella vulgaris* – (Selfheal)
- **8%** *Trifolium pratense* – (Wild Red Clover)
- **7%** *Ranunculus bulbosus* – (Bulbous Buttercup)
- **6%** *Sanguisorba minor* – (Salad Burnet)
- **5%** *Plantago media* – (Hoary Plantain)
- **4%** *Leontodon hispidus* – (Rough Hawkbit)
- **2%** *Anthyllis vulneraria* – (Kidney Vetch)
- **2%** *Geranium pratense* – (Field Geranium)
- **2%** *Origanum vulgare* – (Wild Marjoram)
- **1%** *Primula veris* – (Cowslip)
- **1%** *Thymus praecox* – (Wild Thyme)
- **0.5%** *Ajuga reptans* – (Bugle)
- **0.5%** *Bellis perennis* – (Common Daisy)
- **0.5%** *Fragaria vesca* – (Wild Strawberry)
- **0.5%** *Primula vulgaris* – (Primrose)

BFS140 Bat Friendly Wildflower Mix – 100% Flora



This wildflower seed mix is designed to help attract a food source for bats. Bats have huge appetites and need to eat a lot of insects to have enough energy. This seed mix will create a wildflower area designed to attract insects which will create a food source for bats.

Sowing Rate: 2g/m²

Contains: Wildflowers 100% (20 species)

- **14%** Corn Cockle
- **8%** Cornflower
- **8%** Wallflower*
- **7%** Tobacco Plant*
- **6%** Phacelia*
- **5%** Corn Marigold
- **5%** Corn Poppy
- **5%** Field Scabious
- **5%** Honesty*
- **5%** Night Scented Stock*
- **4%** Candytuff*
- **4%** Common Knapweed
- **4%** Echinacea*
- **4%** Red Campion
- **3%** Oxeye Daisy
- **3%** Sweet William*
- **2%** Bluebell
- **2%** Musk Mallow
- **2%** Verbena*
- **2%** Yarrow

Plants marked * are hybrids or exotics which may be useful in the garden

BIODIVERSE GREEN ROOF SYSTEM

Benefits

- Creates Habitat for threatened wildlife
- Contributes towards Local Biodiversity Action Plans
- Habitat Creation (brownfield sites/wildflower habitat)
- Improved Water Retention, Harvesting & Quality
- Improves Air Quality and Reduced Carbon Emissions
- Reduces Urban Heat Island Effect
- Creates Amenity Space & Wellbeing
- Aid to Planning & Sustainability (BREEAM, CfSH)
- Financial Benefits- Reduced Building Running Costs

Terminology & Types

Green roof is the overall term for any vegetated roof system and there are a number of different types and terms used to describe these different systems. The substrate depth and type and the plant communities that can establish on these mediums define the type of green roof:

Intensive green roofs are also known as rooftop gardens and the vegetation is similar to ground level planting and can include anything from trees and shrubs to swimming pools and allotments. The substrate used ranges from 200mm to 400mm and has a higher organic content and a requirement for high loading capacity.

Sedum roofs are very shallow substrate, low nutrient roofs 20-60mm, the dominant plant cover is a drought tolerant species known as a stonecrop (Sedum sp). These types of roofs have been shown to support less biodiversity and often include non-native plant species imported from overseas.

Extensive or Biodiverse roofs are shallow lightweight systems that can support a diverse assemblage of native wildflowers and grasses. The diversity of vegetation and substrates will create ecological habitats for wildlife and the substrate depth varies from 80- 150mm.

Designing & Planning

Involving a specialist in the early stages of the green roof design process will ensure that the right green roof system is specified to meet the objectives of the project. Whether for credits for BREEAM or CfSH assessments, to meet local biodiversity targets or provide mitigation replacement habitat for brownfield sites a specialist can design and install the roof to meet these objectives.

A structural engineer and or architect must be involved in designing a green roof to calculate weight-loading capacities of the selected green roof system. Phoenix NativeFlora can provide expert horticultural and ecological advice on native species planting and maintenance.

Weights and depths of substrates can vary and a suitably qualified structural engineer will need to be consulted on weight bearing loads of different roof designs. The Table below provides a guide to weight and depth of substrates in different green roof systems.

	Intensive Roof Loadings	Extensive/ 'Biodiverse' Roof loadings
Root barrier and drainage layer	57kg/m ²	11kg/m ²
Depth/Type of Substrate	200-400mm	80-150mm, 10-20% organic content
Plants	26kg/m ²	Wildflowers 10kg/m ²
Weight of substrate (saturated)	250kg/m ² (200mm depth)	96 kg/m ² (80mm depth)
Maintenance	Permanent irrigation required	Periodic
Saturated Total roof loadings (Average typical roof)	333kg/m ²	117kg/m ²



We work with Ecologists who are Full Members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and can advise on enhancing biodiversity on your green roof and attaining landscape and ecology credits for Code for Sustainable Homes (CfSH) and BREEAM. The following Information note is a brief outline of how to plan and design for a green roof system focusing on 'biodiverse' roof systems.

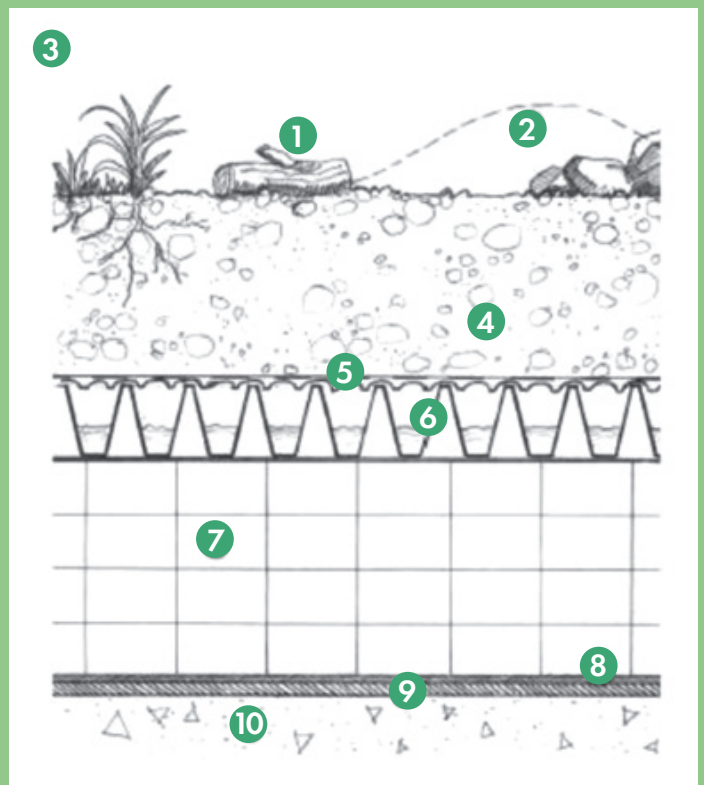


Green Roof Layers

Terrestrial plant communities require adequate water, nutrients, drainage and air circulating around the roots to survive and this is recreated in the green roofing engineered layering system, which follows current best practice.

The waterproofing membrane is one of the most important factors to consider prior to installation and its integrity must be confirmed prior to installation of green roof system by a specialist waterproofing contractor. The root barrier membrane is a protective layer preventing any damage to the water proofing from plant roots. A drainage board provides water storage capacity and allows excess water to drain away and the filter fleece installed above the drainage board prevents substrate from entering the drainage board.

Drainage outlets are also an important component of green roof systems and vegetation barriers composed of large pebbles will prevent vegetation growing beyond the desired areas.



- 1 Biodiversity elements- log and rock piles
- 2 Localised mounding up to 200mm depth
- 3 Wildflower planting

- 4 Extensive crushed brick substrate
- 5 Filter fleece
- 6 Drainage board
- 7 Insulation

- 8 Root barrier membrane
 - 9 Waterproofing layer
 - 10 Structural slab
- © Spacehub Design

Substrates for Biodiverse Roofs

The substrate type and depth are the most important factor when determining what vegetation can establish on the green roof. Evidence has shown that substrates designed specifically for green roofing purposes that meet industry standards (FLL Guidelines and Green Roof Code of Best Practice 2011), perform better and have the following properties:

- Fire clay based\mineral substrate
- Circumneutral pH
- Lightweight
- Good drainage characteristics
- Porous (absorbs water)
- Low nutrient (10% organic content)
- Avoids compaction (large granular)

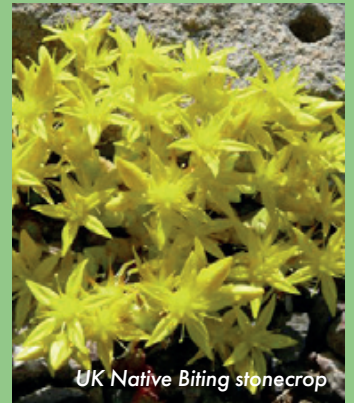
BIODIVERSE GREEN ROOF SYSTEM



Viper's Bugloss



Kidney Vetch



UK Native Biting stonecrop

Plant Selection

It is recommended that UK native, UK provenance plant species are used on biodiverse roofs as they are adapted to the local environment and have evolved with our native pollinators and wildlife providing more valuable foraging resources. The vegetation that will establish well in the dry, shallow soils and low nutrient environments on an extensive green roof are those species that occur in similar dry environments in nature. These are the drought tolerant plant species (Xerophytes) of dry grasslands, brownfield sites and coastal shingle occurring in the UK, which are habitats increasingly under threat. The table at the end of this document is a recommended list of UK native plants that are proven to establish well on extensive/biodiverse roofs.

Recommended plants for biodiverse roofs include a mixture of annual, biennial and perennial wildflowers and grasses that are drought tolerant. Plants that self-seed readily such as kidney vetch (*Anthyllis vulneraria*) and viper's bugloss (*Echium vulgare*) are effective as they allow communities to re-establish after vegetation die back following periods of prolonged drought.

Plants with long flower tubes such as red clover (*Trifolium*

pretense) and viper's bugloss provide valuable nectar sources for native long-tongued bumblebee species. Bird's-foot trefoil (*Lotus corniculatus*) is a larval food plant for many butterfly species. The white flowers of campion species such as bladder and sea campion (*Silene vulgaris/uniflora*) provide good nectar sources for moths, and the seed heads of many wildflowers provide potential refuge and overwintering sites for invertebrates. Composite flowers such as ox-eye daisy (*Leucanthemum vulgare*) and yarrow (*Achillea millefolium*) and hawkbits provide good nectar sources for more generalist pollinators such as flies, butterflies and beetles.

Planting a diverse mix of species will provide nectar and pollen from spring to autumn with plants such as wild pansy (*Viola tricolor*) and common daisy (*Bellis perennis*) flowering as early as March and Lady's bedstraw (*Galium verum*), scabious species and knapweeds flowering well into September.

Stonecrops (*Sedum species*) can be a valuable addition to a biodiverse roof but should not exceed 20% cover. They will readily provide vegetation cover in more exposed areas of shallower substrate and can aid the establishment of diverse wildflowers. White stonecrop (*Sedum album*) is the host plant of the leaf bug *Clamydatus evanescens*, which is a rare invertebrate (Red Data Book 3). Native Stonecrop's are recommended on Biodiverse Roofs as non-native species will not support the same wildlife diversity.

“ Biodiverse roofs should aim for a minimum substrate depth of 80mm that varies up to 200mm to create different microclimates where thinner areas will be less well vegetated and deeper areas will be able to hold more moisture creating structurally diverse vegetation. ”



Establishing Vegetation

Our experience has shown that a combination of plug planting and seeding is the most effective way to establish a biodiverse roof. However for a balanced view the pros and cons of the different planting methods are described below:

Natural Colonisation

It is not recommended to allow roofs to colonise naturally as this can take a long time, it relies on having a good seed source nearby and the bare substrate is likely to become colonised by undesirable weed species such as Buddleja.

If the green roof is located in or near to an environmentally sensitive area and local provenance seed is required, seed should be collected by a specialist contractor and grown into plugs for the green roof or seed spread directly onto the roof (See other methods below).



Seeding with safety harness and landyard

Seeding

Seeding is a cost effective method to vegetate a green roof particularly suitable for larger roofs over 1500m². There is a wide choice of species

available from seed and the installation is relatively straightforward involving hand broadcasting or over larger areas employing hydro-seeding methods or a mechanical spreader. With seeding only, the roof can take up to 2 years before it looks established and most perennial species will not flower until the second growing season and therefore it is recommended that seeding is always used in

combination with plug planting. Additionally, it is recommended that an annual mix is sown with a perennial mix to provide colour in the first season. Substrates specifically designed for seeding are available that have a smaller particle size and higher organic content and should be spread as a top dressing on the main substrate.

Autumn sowing in August/September, depending on prevailing weather conditions, is recommended to ensure that seedlings will germinate in favorable conditions and be exposed to chilling to break dormancy. Phoenix NativeFlora can advise on the timing, seeding rates, substrates, and seed carrier required to sow with a seed mix to ensure even and effective establishment of your green roof.



Plug Planting

Plug planting is an effective way of quickly establishing a green roof and a wide range of suitable drought tolerant species for green roofing are available from Phoenix NativeFlora as plug plants.

Extensive lightweight substrates between 80-150mm are suitable for wildflower plug plants, with some plants requiring deeper substrates than others (refer to plant species table at the end of the document). Ideally plug plants should be planted at the beginning or the end of the growing season (March/April, or September/October) to allow the plants to establish. Phoenix NativeFlora can advise on planting densities, suitable substrates and additional growing materials that will ensure establishment of plug plant vegetation.

BIODIVERSE GREEN ROOF SYSTEM

Optimum Combination for establishing biodiverse greenroof - Plug Planting and Seed

The optimum combination is to install plug plants with a seed mix to ensure successful establishment of biodiverse mix of wildflowers. Some species of wildflower are difficult to establish from seed i.e those that need vernalisation or do not withstand competition and therefore plug plants are preferable however and annuals are more successful from seed. Plug plants will help to stabilize the soil and prevent potential erosion of substrate and wildflower seed.

This combination will provide greater diversity of plants and improved short-term and long-term establishment of vegetation. It also ensures the client achieves their sustainability credits through biodiverse planting in the first year and avoids having to return to replant roofs that have failed through seeding alone.

Sedum and wildflower blankets or pre-established systems

A pre-established sedum or wildflower turf provides an instant effect but is not recommended for biodiverse roof applications.

The plant mixes available are limited and grass species will dominate over wildflowers. In areas where a blanket is installed the substrate cannot be undulating and does not provide open areas for burrowing invertebrates or natural plant colonisation. This is also an expensive solution and daily irrigation of turf during establishment and dry spells is required to keep vegetation alive.

Wildlife on Biodiverse Roofs



Carder bee

Monitoring and research on biodiverse roofs has shown that these wildflower rich habitats can provide important wildlife stepping-stones for invertebrates and can provide foraging

and nesting potential for birds and bats. They should not replace habitat at ground level but in a built-up environment providing habitat at roof level can be very beneficial for biodiversity.

The habitats provide important sites for invertebrate specialists of dry environments including a number of rare species and those of principle conservation importance such as the brown-banded carder bee (*Bombus humilis*), which feeds on the wildflower rich habitat of biodiverse green roofs.

The insect biomass on green roofs is dominated by diptera, the principle food source for bats and therefore can attract foraging bats, particularly if a number of roofs are in the same area. In conjunction with artificial roosting sites at roof level biodiverse roofs can provide suitable habitat for bats in urban areas as wildlife stepping stones.

Biodiversity Features

A biodiverse roof should include a variety of substrate types and depths to increase the mosaic of habitat types, vegetation structure and provide different microclimates for invertebrate species. Ideally the extensive substrate depth should range between 80mm up to 200mm to allow for different plant communities to develop.

“ The seeds and invertebrate biomass present on the green roof (ground dwelling, flying and soil invertebrates such as earth worms and larvae) provide foraging for bird species. The old flower stems left in situ provide nesting material and nesting habitat can be provided on site at roof level through artificial nest boxes or within the building design. ”



Insect Habitat Tower on Green Roof

For example kidney vetch will establish on the shallow substrates and taller perennials such as knapweeds will thrive on the deeper substrates up to 200mm.

Other substrate types in addition to the extensive substrate can include sand mounds, pea gravel, shingle, pebbles,

wood piles and boulders to provide damper areas and cover for ground dwelling invertebrates. Substrate features should be considered where loading capacity allows on the building (discuss with architect/engineer). Where wind erosion is a problem heavier substrates can be used effectively to weigh down the extensive substrate and allow plants to establish by creating sheltered areas behind stone piles.

Water features can also provide an invaluable habitat and can increase insect biomass and provide bathing opportunities for birds. Insect hotels can also provide additional habitat for priority invertebrate species and can be added after initial installation.

Maintenance

Contrary to popular belief biodiverse roofs do require periodic maintenance throughout the lifecycle of the roof. The key maintenance period is up to 3 months after planting during the initial 'establishment period'. Irrigation is particularly important in the first 10 weeks during dry periods.

On roofs over 500m² an automated sprinkler or leaky pipe system should be considered to maintain plant health. For plug plants irrigation is required every 2-3 days to once a week during the establishment

period but wildflower blankets require daily irrigation during dry spells. Green roofs are very nutrient poor environments and therefore the use of a slow release fertiliser can be beneficial to plant establishment (we can advise on fertiliser makeup and application rates). After initial establishment further fertilisation and watering should NOT be required but should be assessed by the maintenance contractor.

Ongoing maintenance on biodiverse roofs should include at least two annual visits by a suitably qualified specialist green roof maintenance contractor. The tasks required in annual maintenance can include:













- Inspection of vegetation and reporting any problems on plant establishment
- Removal of unwanted weeds such as Buddleja, Canadian fleabane, sow-thistles and docks
- Clearance of drainage pits and vegetation barriers around perimeter
- Old seeds heads should be left to overwinter to provide foraging potential for birds and overwintering sites for invertebrates.
- Cutting of wildflower turf and removal of this vegetation may be required on turfed roofs or those with more vigorous grass growth
- Invertebrate and/or wildlife surveys, which may be a requirement under BREAAAM Landscape and Ecology Management Plans. This can provide invaluable information on green roof ecology and help inform future green roof design.













Plant & Seed Supply

Phoenix NativeFlora are one of the largest suppliers of UK native wildflowers in the U.K and are a British Provenance nursery. We grow our plug plants in a 65cc jumbo plug (84 plants per tray) in green roof substrate, which are an optimum size for shallow substrates and easy to plant.















BIODIVERSE GREEN ROOF SYSTEM









	Scientific Plant Name Common Plant Name	Comments
	Achillea millefolium - Yarrow	Medium height perennial. Substrate depth of 80-150mm. Flowering period June to August. Nectar source for generalist pollinators.
	Agrimonia eupatoria - Agrimony	Tall perennial requiring deeper substrates 100-150mm. Suitable for shady areas. Flowering June to September.
	Anthyllis vulneraria - Kidney Vetch	Clump-forming prolific self-seeder is quick to establish. Substrate depth of 80-150mm. Nectar sources bees and butterfly larval foodplant (small blue).
	Armeria maritima spp Maritima - Thrift	Very attractive clump-forming plant suitable for exposed sites by the sea. 80-150mm substrate. Long flowering period April to October.
	Bellis perennis - Common daisy	Low growing perennial suitable for substrate depth 80-150mm. Long flowering period from March to October.
	Blackstonia perfoliata - Yellow-wort	Self-seeding annual. Can grow on very shallow substrates from 50-150mm. Seeds provide suitable foraging for black redstarts, a species of principal importance and London BAP.
	Campanula glomerata - Clustered bellflower	Substrate depth of 80-150mm. Medium height perennial. Flowering June to October.
	Campanula rotundifolia - Harebell	Attractive perennial suitable for substrate depth 80-150mm. Later flowering period July to September.
	Carex flacca - Glaucous sedge	Structural semi-evergreen plant to provide cover in winter. Substrate depth 80-150mm.
	Centaurea cyanus - Cornflower	Substrate depth of 50-100mm. Annual provides colour in first growing season and self-seeds thereafter. Long flowering period May to October.
	Centaurea nigra - Common knapweed	100-150mm deeper substrate depth required, medium-tall perennial. Very good nectar source for bumblebees. Flowering July to September.
	Centaureum erythraea - Centaury	Substrate depth of 80-150mm. Birds forage on seed heads. Flowering July to August.

	Scientific Plant Name Common Plant Name	Comments
	Clinopodium vulgare - Wild Basil	Substrate depth of 80-150mm. Aromatic small perennial. Nectar source for moths. Flowering period July to September.
	Daucus carota - Wild Carrot	Medium height biennial, deeper substrates 100-150mm. Nectar source for generalist pollinators such as beetles. Flowering period June to August.
	Echium vulgare - Viper's Bugloss	Tall biennial, self-seeds and spreads and can grow on shallow substrates from 80mm. Good nectar resource for bumblebees. Flowering period June to September.
	Erigeron acer - Blue fleabane	Medium height self-seeding annual, can establish on very shallow substrates from 50-150mm depth. LAter flowering July to August.
	Fragaria vesca - Wild strawberry	Low growing creeping perennial suitable for shady areas. Produces small edible fruits. Flowering April-Jul.
	Galium verum - Lady's Bedstraw	Substrate depth of 100-150mm, medium to tall perennial, slow-growing. Flowering July to August. Larval foodplant for moth species.
	Geranium robertianum - Herb-Robert	Substrate depth of 50mm-100mm. Suitable for shaded and exposed areas.
	Helianthemum nummularium - Rock rose	Substrate depth of 80-150mm, clump forming perennial. Very good nectar source for pollinators especially honey bees. Long flowering period May to September.
	Hypericum perforatum - Perforate St. John's-wort	Medium height perennial. Substrate depth of 80-150mm. Seed heads good foraging resource for birds species.
	Hypochaeris radicata - Common cat's-ear	Medium height perennial. Substrate depth of 80-150mm. Good nectar source for generalist pollinators. Flowering June to September.
	Leontodon hispidus - Rough hawkbit	Medium height perennial. Substrate depth of 80-150mm. Good nectar source for generalist pollinators. Flowering June to September.
	Leucanthemum vulgare - Ox-eye Daisy	Substrate depth 80-150mm. Medium height perennial, quickly establishes from seed. Long flowering period May to September.

“ This list of wildflowers is recommended for biodiverse roof applications and can be supplied by Phoenix NativeFlora as either plug plants and/or seed. ”



	Scientific Plant Name Common Plant Name	Comments
	Linaria vulgaris - Yellow toadflax	Medium height perennial. Substrate depth of 80-150mm. Host plant of toadflax brocade moth, a specialist of dry environments restricted to southeast. Flowering period July to September.
	Lotus corniculatus - Common bird's-foot trefoil	Prostrate/creeping perennial. Substrate depth of 80-150mm. Good foraging for native bumblebees and larval foodplant for many butterflies. Flowering May to September
	Matricaria chamomilla - Scented mayweed	Annual or perennial herb, slightly aromatic. Can exist on very thin substrates of 20mm-150mm. Flowering periods June to July.
	Origanum vulgare - Wild marjoram	Aromatic attractive perennial. Substrates 80-150mm. Nectar source for moths and bumblebees. Flowering period July to September.
	Papaver rhoeas - Common poppy	Substrate depth of 50-100mm. Annual from seed, colour in the first year and self seeds thereafter. Good nectar source for generalist pollinators such as flies.
	Pilosella officinarum - Mouse-ear hawkweed	Low growing perennial substrate depth 80-150mm. Nectar source for generalist pollinators. Flowering period May to August.
	Plantago coronopus - Buck's-horn plantain	Can grow in very shallow substrate 10-100mm. Suitable for windy and coastal sites.
	Plantago lanceolata - Ribwort plantain	Medium height perennial. Substrate depth of 80-150mm. larva; foodplant for fritillary butterflies.
	Poterium sanguisorba - Sanguisorba	Medium height perennial. Substrate depth of 80-150mm.
	Primula veris - Cowslip	Medium height perennial. Substrate depth of 100-150mm. Spring flowering April to May.
	Rumex acetosa - Common Sorrel	Medium perennial, bluish red throughout the summer. Flowering May to June. Larval foodplant of orange tip butterfly. Substrate depth of 80-150mm.
	Scabiosa columbaria - Small scabious	Medium height perennial. Substrate depth of 100-150mm. Good nectar source for many pollinators. Later flowering period July to September.

	Scientific Plant Name Common Plant Name	Comments
	Sedum acre - Biting stonecrop	Succulent plant suitable for very dry shallow substrates.
	Sedum album - White stonecrop	Succulent plant suitable for very dry shallow substrates. White flowers. Flowering period June to August. Supports rare invertebrate sedum feeding bug <i>clamydatus evanescens</i> .
	Silene latifolia - White campion	Medium height perennial. Substrate depth of 80-150mm. Resource for foraging moths and night flying inverts and therefore attract bats.
	Silene uniflora - Sea campion	Low growing prostrate perennial on shallow substrates 50-100mm. Nectar source for moths. Flowering period June to August.
	Silene vulgaris - Bladder campion	Upright perennial on substrated 80-150mm. Nectar source for moths. Flowering period June to August.
	Thymus polytrichus - Thyme	Mat forming aromatic perennial. Good for high foot traffic areas and shallow substrates under 50mm. Good nectar source for pollinators. Flowering period May to August.
	Trifolium pratense - Red Clover	Low growing perennial, nectar source for long-tongued bumblebee species. Long flowering period May to September.
	Viola tricolor - Wild pansy/heart sease	Small annual or perennial, requires substrate depth of 50-150mm. Extended flowering period from March to October.

ALTERNATIVE GREEN ROOFS



Non - Biodiverse Green Roofs

Phoenix NativeFlora prefers to promote extensive or biodiverse roofs wherever possible.

The diversity of vegetation and substrates is more desirable as it will create ecological habitats for wildlife. The substrate depth varies from 80 - 150mm to support a range of sedum, wildflowers and grasses that naturally occur in the harsh environments associated with green roofs. However there are instances where bio-diversity is not supported due to certain structural limitations particularly in retrospective green roof projects. In these instances it is recognised that a sedum roof may be the only viable solution. It offers the advantages of being extremely low maintenance, drought tolerant and requires a very shallow substrate, just 20-60mm

Sedum Roofs

The sedum genus has been described as containing up to 600 species of leaf succulents that are found throughout the Northern Hemisphere, varying from annual and creeping herbs to shrubs.

The plants have water-storing leaves. The flowers usually have five petals, seldom four or six. There are typically twice as many stamens as petals. Well known European Sedums are: ***Sedum acre*, *Sedum album*, *Sedum dasyphyllum*, *Sedum reflexum* (also known as *Sedum rupestre*) and *Sedum hispanicum*.**

Sedum is a versatile plant for roofs or walls requiring a very shallow substrate. It is less likely to support a range of biodiversity and species used will often include non-native plants which in many cases are imported from overseas. These succulent plants are drought, wind and frost tolerant and will steadily colonize a roof area to provide an even vegetative cover over time. The dominant plant cover is a drought tolerant species known as a **stonecrop (*Sedum sp.*)**.



Sedum Plugs

The plugs are 65cc and are grown and supplied in trays of 84.



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Mycorrhizae products are an important tool in ensuring plant success. Mycorrhizae fungi are essential in root development.

Rootgrow™ Professional (RGPro) contains pure mycorrhizal fungi packaged and supplied in large pack sizes for professional users or when larger planting projects are undertaken.

All RGPro tubs contain sachets of gel powder to be used on bare-root plants if required and a handy 25ml measuring scoop

Suitable for garden designers, landscapers and private individuals with large gardens or planting projects.



PHOENIX native flora *is Peat Free* 45



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