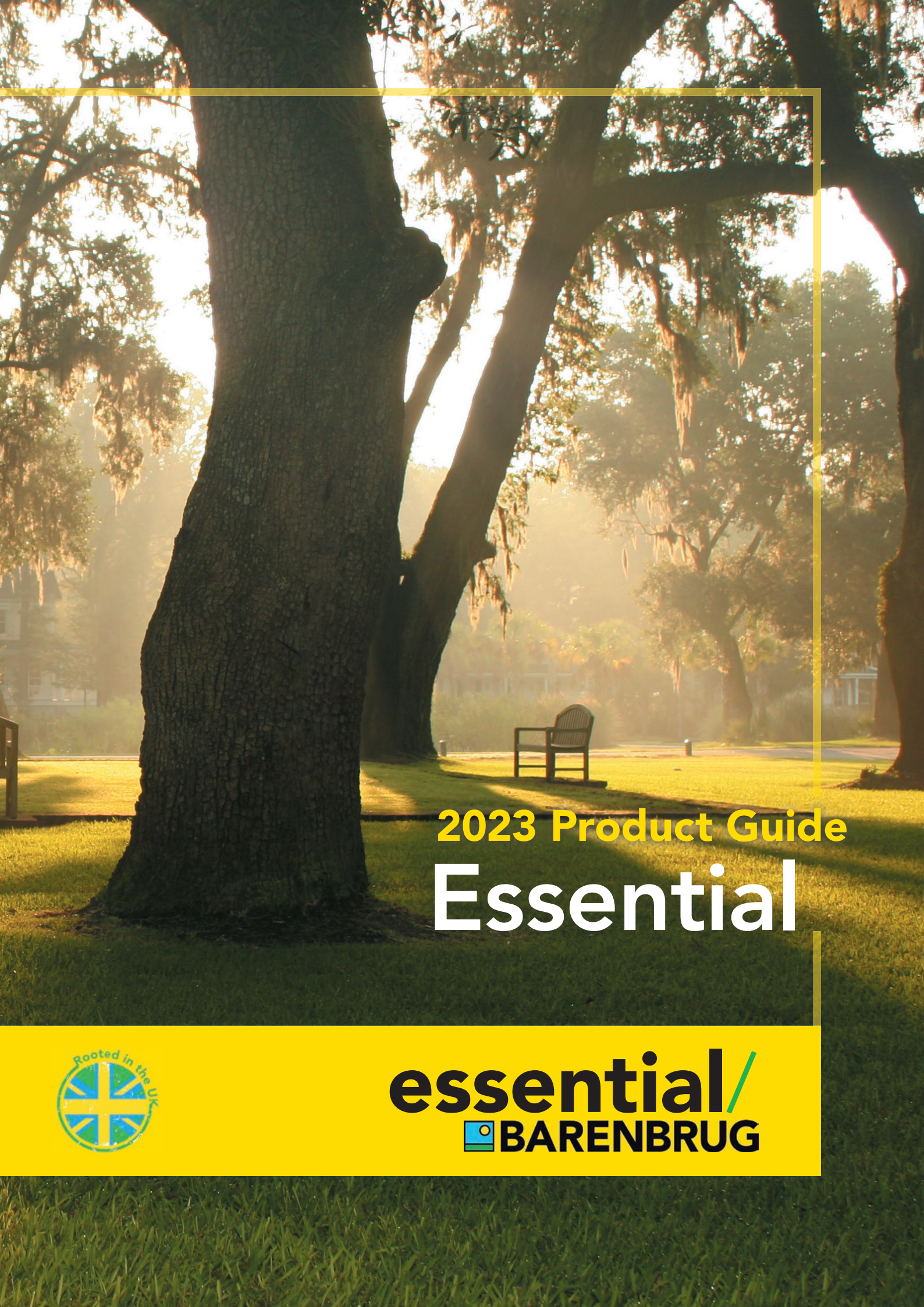


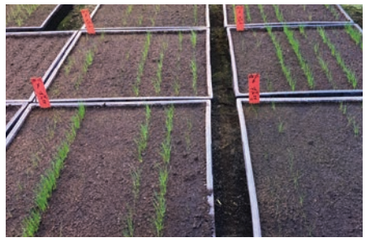
2023 Product Guide

Essential

Rooted in the UK

essential/ BARENBRUG

Welcome to the Essential Amenity Range of grass seed products for 2023



Welcome to the 2023 Essential product guide from Barenbrug. The Essential Range of Sport & Leisure grass seed mixtures has been developed to cover a wide range of applications, from golf greens through to specialist areas like airfields and motorway embankments.

The mixtures have been formulated to offer assured performance at a competitive price. As a breeder of grass varieties, we have been able to utilise unique Barenbrug technologies such as Mow Saver and our SOS annual ryegrass varieties.

For the highest quality of sports turf surfaces, we also have our Sport Range. The Sport Range utilises the best and latest grass varieties to create mixtures that are used at some of the most famous sporting venues, from the greens at St Andrews to tennis courts at The Queens Club.

Digital Catalogues

Our catalogues are available to view and download online at **www.barenbrug.co.uk/resources**

Expert Seed Research

Quality and consistent performance from Barenbrug.

Our research and development focuses on meeting customer needs and developing solutions to improve sports surfaces everywhere. The joy of creating quality products that exceed expectations is at the heart of our research.

UK Development

Our sustained investment in trials ensures we provide the best performing sports grass seed range. Trials across the UK and our own Cropvale Research site ensure our mixtures perform as we expect. Without this proven UK performance, a cultivar won't make it into a mixture and that mixture won't make it into our product range.

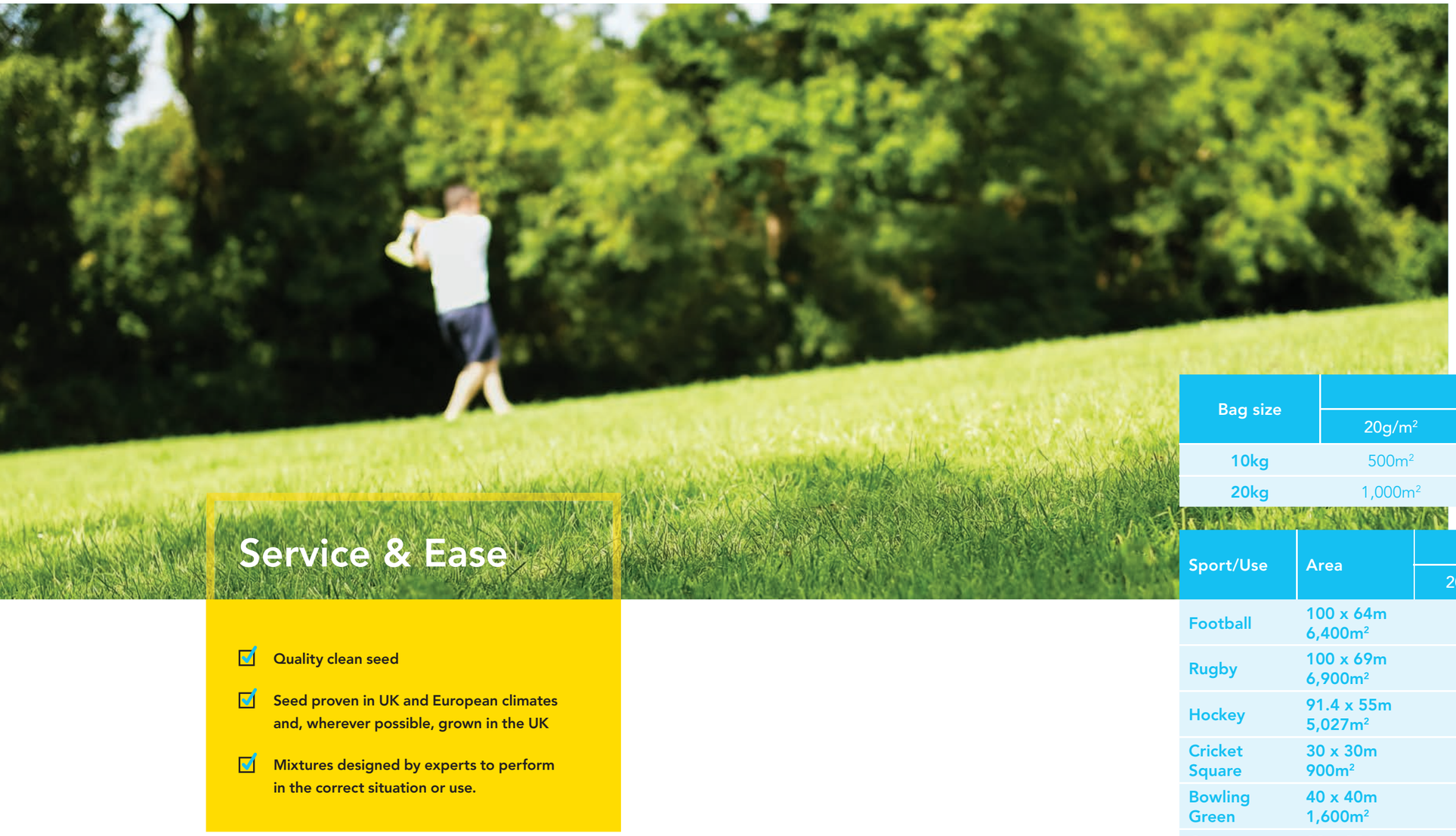
UK Grass Seed Production

With over 2,000 ha of UK production, we produce clean, quality grass seed for all sports. We are the UK's largest Sport & Leisure seed producer, highlighting our commitment to UK farmers. Growing the grass seed here delivers advantages for our customers. Alongside supporting the UK farming industry, we're also aiming to produce all our grass seed to the Higher Voluntary Standard (HVS), which is unique to the UK, guaranteeing a higher level of purity than European Union standards.

Increasingly focused on sustainability, Barenbrug UK is determined to minimise any negative impact on the environment and meet the aims of increasing farming productivity, environment, biodiversity and the enjoyment of green spaces.

With our network of growers, research, distribution, regional technical experts, production, and manufacturing sites across the UK, we are a business firmly rooted in the UK.

Contents



Service & Ease

- Quality clean seed
- Seed proven in UK and European climates and, wherever possible, grown in the UK
- Mixtures designed by experts to perform in the correct situation or use.

We've been a leading grass seed breeder and grass expert since 1904.

BALI REGISTERED

Coverage Guide

How much seed do I need?

A common question and hopefully the information here will help you understand how much seed you need.

Find a grass seed calculator on our website at **www.barenbrug.co.uk/calculate**

Bag size	m² coverage by sowing rate			
	20g/m²	25g/m²	35g/m²	50g/m²
10kg	500m²	400m²	285m²	200m²
20kg	1,000m²	800m²	571m²	400m²

Sport/Use	Area	20kg bag requirements sown at:			
		20g/m²	25g/m²	35g/m²	50g/m²
Football	100 x 64m 6,400m²	7	8	12	16
Rugby	100 x 69m 6,900m²	7	9	13	18
Hockey	91.4 x 55m 5,027m²	6	7	9	12.5
Cricket Square	30 x 30m 900m²	1	1.25	1.75	2.25
Bowling Green	40 x 40m 1,600m²	1.75	2	3	4
Croquet Lawn	32 x 25.5m 816m²	1	1.25	1.5	2
Average Golf Green	500m²	0.50	0.75	1	1.25
Average Golf Tee	300m²	0.30	0.40	0.50	0.75

Area	Seed needed sown at:			
	20g/m²	25g/m²	35g/m²	50g/m²
Average car space 4.8 x 2.4m (11.52m²)	230g	288g	403g	576g
One hectare 10,000m²	10 bags of 20kg	12.5 bags of 20kg	17.5 bags of 20kg	25 bags of 20kg
One acre 4,047m²	4 bags of 20kg	5 bags of 20kg	7 bags of 20kg	10 bags of 20kg

E1

Value Lawn and Landscape

Value for money with no compromise on quality

A value for money general landscape mix with reliable amenity turfgrasses. Suitable for professional landscaping and domestic lawns, forming a dense and durable turf.

- Great value for money
- Ideal for lawns and general landscaping works
- Reliable blend of amenity ryegrass and fescue
- Fast establishment

In the bag	
60%	Perennial Ryegrass
40%	Strong Creeping Red Fescue
Sowing rate: 25-35g per m^2	
Height of cut: Down to 15mm	
Pack size: 20kg	

E2

Tough Turf

Hardwearing mixture for areas of intense usage

Hardwearing mixture for playing fields, campsites, public open spaces and lawns. Creates an exceptionally hard-wearing turf, ideal for areas of intense usage.

- Suitable for multiple applications
- Playing fields, parks and hard-wearing 'family' lawns
- Quick establishment and excellent wear tolerance
- Creates a thick and strong surface

In the bag		
40%	***JUBILEE***	Perennial Ryegrass
40%	***ESQUIRE***	Perennial Ryegrass
20%	***DIPPER***	Strong Creeping Red Fescue
Sowing rate: 25-35g per m^2		
Height of cut: Down to 15mm		
Pack size: 20kg		

E3

Universal Turf

All round excellent aesthetics and wear tolerance

For areas that demand excellent aesthetics combined with the ability to withstand high wear. Wide range of applications: golf course fairways, tees and high-quality lawns and landscapes.

- Excellent appearance combined with durability
- Good tolerance of drought conditions
- Fast establishment
- A golf course fairway type mixture, ideal for use on quality lawns and landscaping

In the bag		
40%	***DIPPER***	Strong Creeping Red Fescue
20%	***BARPEARL***	Slender Creeping Red Fescue
20%	***BARLIBRO***	Perennial Ryegrass
20%	***FANDANGO***	Perennial Ryegrass
Sowing rate: 25-35g per m^2		
Height of cut: Down to 12mm		
Pack size: 20kg		

E4

Fine Turf

Classic 100% fescue mix

A 100% red fescue mixture for high quality formal lawns and low-maintenance landscapes. Suitable for golf course tees and fairways where perennial ryegrass is not required.

- Ryegrass-free mixture
- Low maintenance lawns, landscapes, golf course tees and fairways
- 100% fescue blend for a traditional fine turf
- Excellent appearance
- Very tolerant of drought conditions

In the bag		
40%	***SERGEI***	Strong Creeping Red Fescue
40%	***BARPEARL***	Slender Creeping Red Fescue
20%	***MUSICA***	Chewings Fescue
Sowing rate: 25-35g per m^2		
Height of cut: Down to 8mm		
Pack size: 20kg		

E5

Extra Fine Turf & Bowling Green

Traditional blend of fescues and bent for greens and lawns

A blend of fine fescue and bent, suitable for creating exceptionally fine lawns. Perfect as an affordable option for overseeding golf and bowling greens.

- Affordable option for overseeding or establishing golf and bowling greens
- Tolerant of close mowing down to 5mm
- When mown short, forms an exceptionally tight, dense surface

In the bag		
50%	***BARPEARL***	Slender Creeping Red Fescue
40%	***MUSICA***	Chewings Fescue
10%	***HERIOT***	Browntop Bent
Sowing rate: 25-35g per m^2		
Overseeding rate: 15-25g per m^2		
Height of cut: Down to 5mm		
Pack size: 20kg		

E6

100% Bent Greens

100% common bent. Overseed & renovate golf and bowling greens

Browntop bentgrass blend, ideal for renovating golf and bowling greens.

- Produces a fine, dense turf
- Gives superb summer and winter colour for golf greens
- Able to be close mown down to 4mm
- Excellent autumn overseeding mixture

In the bag		
60%	***HERIOT***	Browntop Bent
40%	***BARKING***	Browntop Bent
Sowing rate: 10g per m^2		
Overseeding rate: 5g per m^2		
Height of cut: Down to 4mm		
Pack size: 10kg		

E7

Sports Ryegrass

Designed for establishing and renovating winter sports surfaces. Features perennial ryegrass varieties that have been tested by the STRI for use on winter sports turf surfaces such as football and rugby pitches.

- 100% perennial ryegrass mixture for exceptional durability
- Good levels of recovery from wear
- A cost-effective option for high-wear sports surfaces

Great for sport, your cost-effective option

In the bag		
40%	***BARORLANDO***	Perennial Ryegrass
35%	***FANCY***	Perennial Ryegrass
25%	***FANDANGO***	Perennial Ryegrass
Sowing rate: 30-50g per m^2		
Overseeding rate: 15-30g per m^2		
Height of cut: Down to 20mm		
Pack size: 20kg		

E8

Shaded Areas

Contains a blend of species that will tolerate shaded conditions. Suitable for shaded lawns or general landscape areas with low light levels.

- Thrives in shade as well as areas of full sun
- Creates an attractive turf
- Tolerant of the dry conditions typically found under trees
- Ideal for sowing under new orchards and tree plantations
- Slow growing ryegrass

Keep your grass green, even when it is in the dark

In the bag	
40%	Perennial Ryegrass
25%	Slender Creeping Red Fescue
25%	Strong Creeping Red Fescue
10%	Hard Fescue
Sowing rate: 25-35g per m^2	
Height of cut: Down to 15mm	
Pack size: 20kg	

E9

Mow Saver

A unique low-maintenance mixture utilising a perennial ryegrass that has demonstrated up to 40% slower growth than other amenity cultivars. The result is a mixture that is fast to establish, very hardwearing and possesses proven low-maintenance qualities.

- Up to 40% less mowing
- Saves money through time, labour and fuel savings
- Helps the environment by reducing machinery operations and CO^2 emissions

Less time mowing, more time enjoying

In the bag		
50%	***BARPRIUM***	Perennial Ryegrass
30%	***BARPEARL***	Slender Creeping Red Fescue
20%	***MUSICA***	Chewings Fescue
Sowing rate: 25-35g per m^2		
Height of cut: Down to 12mm		
Pack size: 20kg		

E10

Clay/Waterlogged Soils

Formulated for areas that are prone to periods of short-term flooding and seasonal waterlogging.

- Ideal for Sustainable Drainage Systems (SuDS)
- Tolerant of extended periods of waterlogging
- Deep-rooting to stabilise soil
- Suitable for areas that are dry through summer and wet through winter
- Able to recover from short periods of flooding

Flood prone areas and waterlogged soils

In the bag	
40%	Perennial Ryegrass
40%	Tall Fescue
20%	Strong Creeping Red Fescue
Sowing rate: 25-35g per m^2	
Height of cut: Down to 15mm	
Pack size: 20kg	

E11

Water Saver/Dry Soils

Designed for areas of extremely dry, thin and sandy soil that are prone to drought. Also ideal for areas of normal soil conditions that are subject to restricted water usage.

- Developed for drought prone soils
- Ideal for areas where water usage is restricted
- Contains tall fescue, the most drought tolerant species for the UK climate
- Excellent wear tolerance once established

Dry soils, prone to drought can rejoice

In the bag	
50%	Perennial Ryegrass
50%	Tall Fescue
Sowing rate: 25-35g per m^2	
Height of cut: Down to 15mm	
Pack size: 20kg	

E12

Rapid Repair & Winter Establishment

Rapid germination for emergency repairs and low temperature germination for winter use. In trials the annual ryegrass has germinated at temperatures as low 3.5°C.

- Annual ryegrass *Barterra* can germinate in 3-5 days in normal temperatures
- Ideal for repairing winter sports pitches
- Strong establishment
- Very hardwearing

Fastest germination time, lowest temperature germination

In the bag		
50%	***BARTERRA***	Annual Ryegrass
50%	***BARDORADO***	Perennial Ryegrass
Sowing rate: 30-40g per m^2		
Overseeding rate: 20-40g per m^2		
Height of cut: Down to 20mm		
Pack size: 20kg		

E13

Coastal Areas

Developed for coastal areas which are frequently composed of free-draining sandy soils, prone to drought and exposed raised levels of salinity.

- Tolerant of drought conditions
- Includes species that are tolerant of saline conditions
- Contains deep rooted and drought tolerant species
- Good levels of wear tolerance

Coastal lawns and landscapes – salt and drought tolerance

In the bag	
40%	Slender Creeping Red Fescue
30%	Perennial Ryegrass
20%	Tall Fescue
10%	Hard Fescue

Sowing rate: 25-35g per m^2

Height of cut: Down to 15mm

Pack size: 20kg

E14

Airfield

A specialist mixture for airports and airfields adopting a "Long Grass Management" policy. Designed to reduce the danger of birds striking aeroplanes in and around airports by creating an unfavourable bird habitat.

- Creates an unfavourable habitat for birds
- Stiff, upright growth habit deters birds from landing
- Very persistent and tolerant of harsh conditions
- Use as part of a 'Long Grass Management' programme, maintained at 150mm

Protecting aircraft with an unfavourable habitat for birds

In the bag	
90%	Tall Fescue
10%	Annual Ryegrass

Sowing rate: 20-30g per m^2

Height of cut: Maintain to 150mm

Pack size: 20kg

E15

Road Verge

The official Department for Transport mixture for use on road verges. Fast to establish and tolerant of the harsh conditions typical of road verges.

- Official Department for Transport road verge mixture
- Tolerant of drought and moderate salinity
- Fast to germinate and establish
- Tolerant of a wide range of soils

Official Department for Transport mixture

In the bag	
40%	Strong Creeping Red Fescue
25%	Perennial Ryegrass
10%	Chewings Fescue
10%	Hard Fescue
10%	Smooth Stalked Meadow Grass
2.5%	Highland Bent
2.5%	White Clover

Sowing rate: 10-20g per m^2

Height of cut: Down to 75mm

Pack size: 20kg

E16

Embankment & Ground Cover

Designed to give rapid, yet long lasting ground cover on steep embankments and areas of unstable or loose soil. Utilises deep-rooted and creeping species to stabilise and bind soil.

- Formulated to be our best performing mixture for establishing steep banks
- Rapid germination from 'nurse crop' annual ryegrass
- Creeping and deep-rooted grasses for soil stabilisation
- Very tolerant of harsh conditions

Steep embankment grass cover

In the bag	
25%	Perennial Ryegrass
20%	Strong Creeping Red Fescue
15%	Slender Creeping Red Fescue
15%	Tall Fescue
10%	Smooth Stalked Meadow Grass
10%	Hard Fescue
5%	Highland Bent

Sowing rate: 25-50g per m^2; higher sowing rates for steep slopes

Height of cut: Down to 50mm

Pack size: 20kg

E16-C

Embankment & Ground Cover plus Clover

Our E16-C mixture with the added benefit of small leaf white clover.

- White clover fixes nitrogen, making this the best choice for very thin, impoverished soils.
- Creeping and deep-rooted grass species to stabilise and bind soil

Added clover to steep embankments

In the bag	
25%	Perennial Ryegrass
20%	Strong Creeping Red Fescue
12.5%	Tall Fescue
12.5%	Slender Creeping Red Fescue
10%	Hard Fescue
10%	Smooth Stalked Meadow Grass
5%	Highland Bent
5%	White Clover

Sowing rate: 25-50g per m^2; higher sowing rates for steep slopes

Height of cut: Down to 50mm

Pack size: 20kg

E17

Slow Motion

Composed of slow growing, low-input species for low-maintenance lawns and landscapes.

- Our slowest growing grass seed mixture
- Perfect for lawns with robotic mowers
- Ideal for landscapes with low traffic levels
- Low fertiliser requirements
- Excellent visuals, fine textured grasses

Minimal growth for maximum time saving

In the bag	
35%	Strong Creeping Red Fescue
25%	Chewings Fescue
20%	Smooth Stalked Meadow Grass
15%	Hard Fescue
5%	Browntop Bent

Sowing rate: 25-35g per m^2

Height of cut: Down to 15mm

Pack size: 20kg

Wildflowers from Barenbrug

We have developed a portfolio of wildflower seed mixtures that are specifically suited to particular growing environments and soil types.

Don't forget grass choice

One of the main problems encountered with wildflower areas is grass dominance. Strong grass growth can easily smother out slower growing wildflower species. To help minimise this, all of our mixtures contain yellow rattle – a semi-parasitic plant, which limits levels of grass growth, allowing more room for other species to establish. Yellow Rattle is one of the key species found in many wild meadows throughout the country.

Being the grass experts, we know that the grass blend used in 80:20 mixtures contains grasses that are slower growing in order to minimise the risk of wildflowers being smothered out. Some of the grass species in the mixtures are quite rare and very attractive in their own right.

Your wildflower partner

We offer a wide variety of mixture in both 100% wildflower and 80:20 grass:wildflower blends. These are available in a wide range of weights. Our team can also help you choose the correct species for your scheme or project.

Annuals

Native and non-native annual wildflowers

Universal annual & perennial

A reliable mixture which will perform in almost any situation. Comprises a blend of perennial and annual species which give instant colour by flowering in the first year.

- **Contains 20 wildflower species**
- **Feature species: Cornflower, Poppy, Oxeye Daisy, Meadow Buttercup**

Cornfield annual

A 100% annual mixture designed to give a big hit of colour. Includes the five most popular UK native annual wildflower species. Can be added to other mixtures to provide impact in the first year.

- **Contains 5 wildflower species**
- **Feature species: Cornflower, Poppy, Corn Marigold, Corn Chamomile, Corncockle**

Red, white & blue non-native

Contains 26 species including Cornflower, Cosmos, Poppy, Delphinium and Californian Poppy.

Classic annuals non-native

Contains 18 species including Corncockle, Chrysanthemum, Nigella, Cornflower, Coreopsis and Poppy.

Pastel shades

Contains 8 species including Iberis, Candytuft, Nigella, Cosmos and Poppy.

Groundcover – Low growing non-native

Contains 8 species including Mignonette, Alyssum, Candytuft, Marigold and Cornflower.

Perennials

Native and non-native perennial wildflowers

Clay, heavy soils

Designed to be used on soils which are clay based, prone to waterlogging during the winter and sometimes drying out during the summer months.

- **Contains 20 wildflower species**
- **Feature species: Meadow Cranesbill, Betony, Meadowsweet, Meadow Vetchling**

Acidic soils

A blend of wildflower species which are frequently found growing on soils with a low pH, such as heathland.

- **Contains 18 wildflower species**
- **Feature species: Devil's Bit Scabious, St John's Wort, Common Catsear, Autumn Hawkbit**

General purpose, classic hay meadow

A mixture of some of the most commonly found wildflower species in the UK. Can be used on a broad range of soil types.

- **Contains 13 wildflower species**
- **Feature species: Yellow Rattle, Oxeye Daisy, Meadow Buttercup, Common Knapweed**

Wetland and water edge

Suitable for sowing in areas bordering lakes, ponds and watercourses. Typically the soil in these areas will be moist year-round.

- **Contains 24 wildflower species**
- **Feature species: Yellow Flag, Iris, Purple Loosestrife, Greater Birdsfoot Trefoil, Gypsywort**

Hedgerow and woodland edge

A mixture which features species that will tolerate a degree of shade and are typically found growing along hedgerows, on the edges of woodland and in woodland clearings.

- **Contains 21 wildflower species**
- **Feature species: Foxglove, Tufted Vetch, Hedge Bedstraw, Wild Garlic**

Dry, sandy

Formulated to be used on soils which are sand-based, free-draining and very dry during the summer months.

- **Contains 21 wildflower species**
- **Feature species: Lady's Bedstraw, Viper's Bugloss, Field Scabious, Toadflax**

Coastal

Features species which are often found growing in a coastal environment. These species are typically quite hardy and tolerant of impoverished soils and a degree of salinity.

- **Contains 18 wildflower species**
- **Feature species: Campion, Viper's Bugloss, Goatsbeard, Common Toadflax**

Loam/variable soils

A mixture designed to be used on loam soils which are a mixture of soil types and tend to retain a degree of moisture. A reliable mixture that can be used on larger sites where the soil varies across the site.

- **Contains 22 wildflower species**
- **Feature species: Tufted Vetch, Red Campion, Ragged Robin, Birdsfoot Trefoil**

Chalk, limestone, calcareous

Suitable for use on soils which are rich in chalk and limestone. These soils are characteristically quite thin, dry and low in nutrients.

- **Contains 23 wildflower species**
- **Feature species: Greater Knapweed, Wild Basil, Bladder Campion, Wild Marjoram**

Short flowers

Ideal for smaller areas such as along roadsides where restricted visibility may be an issue. The wildflower species used in this mixture will grow to approximately knee height.

- **Contains 16 wildflower species**
- **Feature species: Rough Hawkbit, Forget-Me-Not, Bladder Campion, Betony**

Tall flowers

Formulated using wildflowers which can grow to approximately thigh height. Can be sown alongside our 'Short Flowers' mixture to create a contrasting feature.

- **Contains 18 wildflower species**
- **Feature species: Greater Knapweed, Field Scabious, Foxglove, Evening Primrose**

Bees and butterflies

A broad and reliable mixture that contains annuals, perennials and biennials. Each wildflower species contained in the mixture is featured on the Royal Horticultural Society 'Perfect for Pollinators' list. Annual species will provide instant results by flowering in the first year.

- **Contains 32 wildflower species**
- **Feature species: Cornflower, Foxglove, Field Scabious, Kidney Vetch**

Wildflowers Advice

It is estimated that since the Second World War 95% of the UK's wildflower meadows have been lost. The post-war development of herbicides and high yielding forage grasses meant that landowners were able to convert their old hay meadows into highly productive grassland. Although unimproved grassland and wildflower meadows are of low value from a forage perspective, they are extremely valuable for preserving our native species and providing a habitat for wildlife.

Around 15,000 hectares of unimproved grassland are believed to remain nationwide. This figure is now on the increase with many areas now being established with wildflowers. Road verges, farm field corners, public open spaces and even gardens are increasingly being established with wildflowers – all of which is of great benefit to protecting the unique botanical identity of the UK.

There are believed to be approximately 1500 species of wildflowers found in the UK. These can be placed into the following categories:

Annuals

Annual species are ones which complete their life cycle within a one year period. They typically establish from seed in the Spring, flower, produce seed and completely die by the onset of Winter. The continuation of the species is entirely dependent on the successful establishment of the seed produced. As their survival depends on the success of their seed, annuals have evolved to produce larger quantities of seed. Annuals require ground disturbance each year in order to establish, this is why they are seen growing in road verges, waste ground and on arable farm land. Annuals can provide a boost of colour to Spring sown seed mixtures, although this will only last for one season as their seed will not establish in a developed sward.

Example species: Cornflower, Poppy, Corn Marigold.

Biennials

Biennial species complete their lifecycle in a two year period. In their first year of growth a biennial plant will produce leaves, roots and stems before going into dormancy over the Winter months. In year two they will grow significantly, flowering and producing seed before completely dying. Biennial species are often characterised by their tall and upright growth habit.

Example species: Foxglove, Viper's, Bugloss, Great Mullein.

Perennials

The majority of wildflower species are perennial. Perennial species are ones which re-establish in the spring from their own rootstock. Most species will germinate from seed in year one, flower and produce seed in year two, go dormant over the winter and re-establish in the Spring. Some perennials are short lived, only lasting for three to four years, whereas some species can survive for many years.

Example species: Knapweed, Cowslip, Field Scabious.

Yellow Rattle

Yellow Rattle is an interesting plant because it survives by drawing its nutrients directly from the roots of surrounding grass plants. This is useful because it helps to reduce the vigour of the surrounding grass plants, allowing more opportunity for other flower species to emerge and thrive. This makes it a key component of the majority of flower-rich grasslands. It is an annual plant; however, it will happily re-establish itself in a mature sward unlike most other annual species.

Sourcing seed

Wildflower seed is produced in two different ways:

Wild meadow collection

Wild meadow collection is when seed is directly harvested from an area of wild, unimproved grassland. The sites harvested are ones which have never been knowingly altered by being sown with native species. The sites are harvested with the permission of the owner and care is taken to monitor the sites to ensure that the harvesting has no detrimental effect.

The harvesting is normally done with a machine called a brush harvester or with a very small combine harvester. Meadows can be harvested at differing times of the year in order to target different species. Two of the main species harvested directly from meadows are Yellow Rattle and Meadow Buttercup as these both mature and set seed from July.

Field crops

In order to produce a reliable and sustainable source of seed, wild collected seed can be field sown to create a manageable crop. Some species are quite slow to establish, so these are grown as individual plug plants which are then mechanically planted in the field. This creates a crop that can be managed by regular weeding and harvested at exactly the right time.

Site Evaluation and Preparation

Site Evaluation and Mixture Selection

The properties and location of a particular site will have an influence on the species which will thrive. The main factors to evaluate are:

- Soil fertility
- Soil moisture/drainage
- Soil type e.g. Sandy, Clay, Acidic, Calcareous
- Shade/light levels

Once the site has been evaluated, an appropriate mixture can be selected based upon the findings. If you are unsure of exactly what mixture to select, we are happy to advise you. Wildflower mixtures are unlikely to be successful in areas of high fertility. In such areas it is likely that a small number of species will become dominant and competition from grasses will be a problem. In areas of very heavy shade the potential to support a diverse range of species is also limited.

In high fertility areas it would be advisable to sow an annual mixture for several years, cutting and collecting the vegetation each year. This will help to remove nutrients from the soil potentially allowing for a perennial mixture to be sown in later years.

We are always happy to help you select which mixtures will suit your requirements.

Preparation

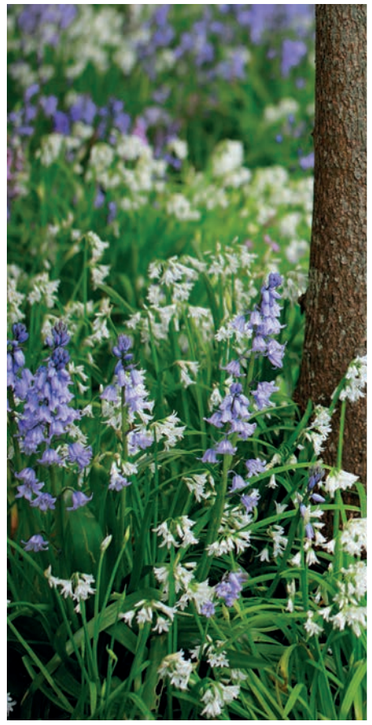
Good preparation is of crucial importance for a wildflower sowing to be successful. If unwanted species establish in amongst a wildflower sowing it can be very difficult, or near impossible to effectively control them. The main objective is to minimise the establishment of weeds following sowing.

Site Clearance

Any existing vegetation should be cut and cleared from the site. It is important to remove any cut vegetation to prevent it from rotting down and enriching the soil. The remaining vegetation can be treated with a total herbicide, such as glyphosate.

Cultivation

Once any vegetation has completely died back, the soil can be cultivated to a depth of around 100mm. Any remaining debris such as large stones or roots should be removed.
If time allows, further weed control can be performed by allowing any weeds to germinate and spraying them with glyphosate. This can be performed multiple times to achieve a clean seed bed. Normally you can sow seed two weeks after an application of glyphosate, though it is advised to check manufacturer recommendations beforehand.



Seed Sowing and Establishment

Sowing

The sowing rates for wildflower seed mixtures are relatively low - there are two reasons for this:

- Wildflower seed is often very fine, so a little goes a long way.
- The aim is to achieve a relatively open sward in order to allow the wildflowers room to establish. This is the opposite of sowing lawn seed, where the objective is to develop a dense sward with a very high plant population.

To make sowing easier, it is possible to mix the seed with a 'carrier' in order to increase the volume. The material used is not crucial but the most common choices are dried sand, sawdust and compost for smaller areas. Wildflower mixtures do not require sowing deep - broadcasting the seed onto the surface and lightly raking or rolling is sufficient to achieve good seed to soil contact.

Sowing can be made easier by mixing the seed.

Suggested sowing rates:

- 100% Wildflower Seed Mixtures = 2g/m²
- Grass and Wildflower Seed Mixtures (80:20) = 5g/m²

Optimum sowing times:

- Spring – March to May
- Summer – June to July avoiding excessively hot and dry conditions
- Late Summer/Autumn – August to October

Establishment

Wildflowers all germinate and establish at different rates. Some species may take a number of years until they emerge and begin to flower, whereas others flower in a matter of weeks. Some seeds require a prolonged period of exposure to cold in order to break their dormancy and germinate. Seed dormancy is a mechanism that inhibits germination until the conditions are ideal for successful establishment.

Annual wildflower species when sown in the Spring will flower in the same year. Biennial and Perennial species will not flower in the first year of sowing except for a handful of species such as Oxeye Daisy and White Campion. For this reason it is often a popular choice to add some annuals into a perennial mixture when sowing in the Spring.

When sowing a mixture containing grasses, it will be the grass species which germinate and establish first. This will act as a 'nurse crop' for the wildflowers, sheltering them whilst they establish as well as preventing soil erosion by stabilising the soil.

The grasses selected to go into our mixtures have been deliberately chosen to be non-competitive, slower growing species.

Grass dominance is a common reason why wildflower sowings sometimes fail, so by including only slow growing species this is minimised.

Maintenance

Sowing

In the first full year it is advantageous to regularly cut the area to a height of 60mm through the growing season. Although this sounds detrimental, perennial species will not flower in year one, so no flowers are actually being lost. By cutting in the first year, the competition from the grasses is minimised and more light is allowed to reach the lower growing wildflower species at the base of the sward. If a mixture was sown containing annuals, these should be allowed to flower and then the whole area cut in July. This will prematurely end the flowering display from the annuals, but it will allow the perennials a better chance of establishment. In subsequent years the annual maintenance regime should consist of the following:

Spring Cut

It is not uncommon for there to be an initial flush of grass in the Spring. This can be detrimental to the wildflower species as they will only just be starting to grow and can be easily swamped out. By cutting to around 60mm and collecting the debris, the levels of grass growth will be reduced for the coming months allowing for more wildflowers to emerge.

Summer/Autumn Cut

The optimum time to cut an area of wildflowers is in late July. This is replicating a traditional hay cut. By cutting and collecting the debris in July the maximum amount of organic matter possible is being removed from the area, minimising the amount of nutrients that can be returned to the soil. Cutting in late July does mean that the flowering period is sacrificed prematurely; however, cutting at this time will result in a more diverse species population. The later the cut is performed, the less diverse the population will be. A compromise would be to vary the cutting time each year, or on larger sites cutting areas at different times on an annual rotation.

End of Season

At the end of the year, before the onset of Winter, a final cut can be made if required. This serves to remove any grass growth following the main Summer cut, leaving the sward open and tidy through the Winter months. At the end of the season it is also beneficial to disturb the sward either by raking or chain harrowing. This will open up the sward allowing room for more wildflower species to emerge.

Wildflower Seed Ensures Eastbourne Golf Club is Blossoming

Willingdon Golf Club course manager Luke Turner isn't just trying to create the perfect greens for members, he's also hoping to attract a much wilder set of visitors to the 18-hole course.

Set among the protected grassy downlands on the edge of the South Downs in Eastbourne, the 120-year-old course, recently listed as one of the top courses in Sussex, is a haven for birds and reptiles – and, more recently, wildflowers.

As well as hand crafting bird boxes and reptile homes, Luke and his deputy James Wilkinson have turned an area of rough into a wildflower meadow that's attracting more than 25 species of butterfly.

"Greenkeepers and golf courses can sometimes be portrayed as environmentally unaware; that we are not concerned with the environment around us and ecology of our sites" says Luke, who has been working as a greenkeeper at Willingdon for eight years. "But we definitely don't see it like that here."

Wild at Heart

When an elderly member of the golf club passed away last year, Luke and James were approached by the family to create a memorial for them. They hit upon the idea of a wildflower meadow.

"I'd used Barenbrug's Cornfield Annual wildflower mix at a previous course and it was very effective, with very reliable germination, so I knew this would perform well," says James, who joined Willingdon in February. "It's a very versatile mix and seems to cope well, wherever you use it."

After selecting a specific site on the course in early spring, James and Luke broadcast the seed thickly using sand as a carrier. They sowed seed in multiple directions to ensure good coverage and lightly raked it over. By mid-May there was complete coverage with an inch of lush green growth, and at the beginning of July the first flowers began to emerge.

As a 100% annual mixture, with five of the most popular native flowers included: cornflower, poppy, corn marigold, corn chamomile and corncockle, Barenbrug's mix is designed to give a big hit of colour. And that's just what it did.

"Over one weekend the whole area had transformed into a stunning carpet of colour," says Luke. "It was alive with butterflies and bees and it could be seen from two or three of our tees so it had a stunning visual impact for members. The end results were like something out of a brochure."

Rare Gem

Thanks in part to the mix's endurance – it stayed colourful throughout July, August and into September – the new wildflower patch attracted a record number of bees and butterflies at the course, including rare species such as Adonis Blue and Dingy Skipper.

It's something that might have made Willingdon course designer Dr Alister MacKenzie proud. In 1925, he redesigned the course to make more of its natural features and had a strong conviction that golf was good for health.

"We are trying to take the course back to its downland grassy routes, and make the site more ecologically varied," says Luke. "The golfing and greenkeeping industry has changed massively in the last 4-5 years and an increasing number of golf clubs are now pushing their commitment to ecology and making course management more sustainable. We actively promote and encourage that approach here."

Turf Grass Identification

PERENNIAL RYEGRASS
Lolium perenne

SMOOTH-STALKED MEADOWGRASS
Poa pratensis

SLENDER CREEPING RED FESCUE
Festuca rubra litoralis

STRONG CREEPING RED FESCUE
Festuca rubra rubra

CHEWINGS RED FESCUE
Festuca rubra commutata

BROWNTOP BENT
Agrostis capillaris

CREEPING BENT
Agrostis stolonifera

HARD FESCUE
Festuca brevipila

TALL FESCUE
Festuca arundinacea

TUFTED HAIRGRASS
Deschampsia caespitosa

CRESTED HAIRGRASS
Koeleria macrantha

ANNUAL MEADOWGRASS
Poa annua

Regional Technical Support

At Barenbrug, we work together as a team to serve our clients wherever they need us. We have a team of technical experts based around the UK, as well as office locations across the UK and as part of the wider Barenbrug Group worldwide. We make our collective knowledge, experience and global network available to our clients.

Our head office, administration centre and main production facility is in Bury St Edmunds, Suffolk as well as in Falkirk, Scotland. Our research site at Cropvale, Evesham, trials both agriculture and sport & leisure varieties and mixtures, providing a solid testing ground for our material.

With over 800 employees and operating companies in 18 countries on 6 continents, we have been the leading grass seed business in the world for over 100 years.

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Conditions of sale

In case of unavailability Barenbrug UK Limited reserves the right to substitute any variety in any mixture with one of similar merit.

Any change will be detailed on the bag.

The placing of an order constitutes an acceptance of our terms and conditions of sale by the buyer.

Full terms and conditions can be found at www.barenbrug.co.uk.

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