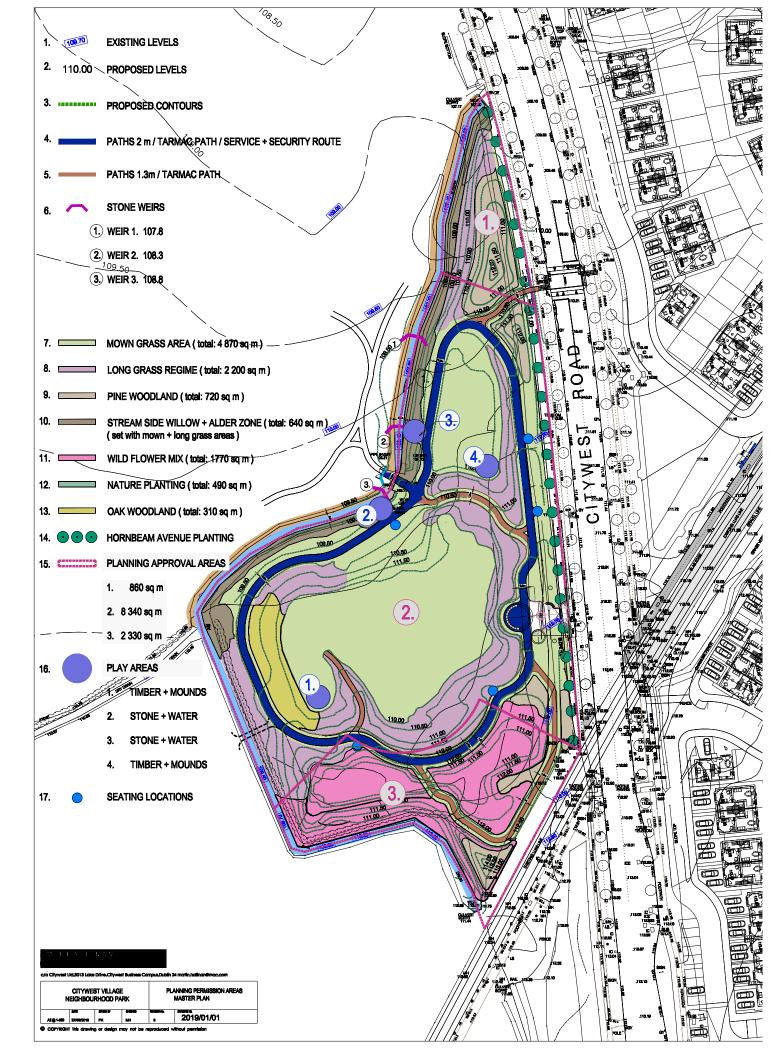
Wildflower Meadows being developed in Citywest in 2020



Purple Loosestrife

Optional Eriophorum Angustifolium (Cotton Grass)

Citywest Neighbourhood Park Wildflower Meadows to be developed during 2020



Native Origin Irish Wildflower Seed Mixture: Product Code: EC09

Product Name: Species Rich Amenity Grassland (After the Heritage Council list of Grassland Classification)

It can be sown with our without grass, and can be left tall, cut short or given mixed and varied management. Typical masses of colour in the early years, the species diversity offers a long season range of species that come and go throughout summer. As each species comes into its own, the meadow attains a patchwork of alternating species all competing for space. Maintaining yellow rattle in the flora is essential for this meadow. This mixture attracts butterflies, bees and birds as well as a host of insects. With some maintenance even native Orchids may flourish on suitable sites.

Species List: EC09

Birdsfoot Trefoil, Black Meddick, Cowslip, Devil's Bit Scabious, Eyebright, Field Scabious, Greater Trefoil, Kidney Vetch, Lady's Bedstraw, Lesser Knapweed, Marjoram, Meadow Buttercup, Mullein, Ox-eye Daisy, Ragged Robin, Red Campion, Red Clover, Ribwort Plantain, Rough Hawksbit, Salad Burnet, Selfheal, St Johnswort, Wild Angelica, Wild Carrot, Yarrow, Yellow Agrimony, Yellow Rattle, Orchid seed from wild meadow harvests also included.

Annuals included:

Corn Marigold, Corn Poppy, Corncockle, Cornflower, Scented Mayweed

Seed Mixture Specifications: Total number of seeds per gram: 1900

Native Irish Origin, Wildflower Seed Mixture. EC09 Suitable for soil type: Amenity Grassland, Parks, Loam, light Clay, Damp sand, moderate clays or Improved soils. Moisture Level: Very Dry, Dry, Normal, Occasionally Moist, but not Flooded Wet. pH range: Best between 5. >7.9. Aspect: Sunny, rare or occasional shade and not deeply or regularly shaded. Morphology:

Life Cycle: Annual / Biennial / Perennial. Height Range: <30cm to >150cm. Flowering Period: March to September, but may falter in very dry summers, however species will recover. Fertility Range: Will grow slowly in very poor soil, if very infertile apply fertiliser. Wintergreen: Moderate, if required sow with grasses

Sowing Specification: As Normal, roll or rake into surface to keep out of reach from birds. Sow this mixture in Autumn and Spring so the seed can germinate before the soil dries out. Soil Preparation: To establish, especially since it will be sown on low nutrient soils, fertiliser or weed free organic matter may be required to aid germination. Optimum Sowing Time: Late spring, early autumn, when the soil is damp. Sowing Conditions: Normal. Protect from rabbit as germination emerges in 6th to 10 week after sowing. Sowing Method: By hand is recommended, if using seed spreaders be careful to insure the small varieties of seed do not drop to the bottom of the seed spreader and get sown all in the one place. Can be Hydrasown. Fertiliser: No. Seed Sowing Rates: 1.5 grams per metre.

Normal sowing rate 'without added grass seed': 1.5 grams per metre. High sowing rate 'without added grass seed': Add 1 to 3 grams per metre.

Grass seed or nurse crop requirement:

Nurse Crop: No nurse crop is required. Grass Seed Requirement: Normal Parkland Grasses, add fescues and Bents, keep Perennial ryegrass rates very low. Sow with or without grasses: Sowing rate with grasses: 1.5 normal rate, 2 to 4, 4 to 6 grams per metre. 50% Flora / 50% grass seed, or up to 80% grass at 6 to 7 grams per metre where erosion may occur. Seed Specification:

In normal conditions (mainly in early Autumn and Spring) this mix should germinate 6 to 10 weeks after sowing, from then on provided the sward is kept open and a 'Thatch' is not allowed develop, species will continue to germinate and emerge, through to the third year. Up to 60% of all seed should germinate in the first year. Up to 50% of all species should germinate in 12 months. Up to 90% of all species should have flowered by the fourth year after sowing.

Performance: Attracts many butterfly species.

If this mixture is sown with annuals, or contains annuals, they will flower profusely in the first year, provided they are sown before June. They require one cut when finished flowering. In the second year the biennials will also be colourful. Cut once in late August.

In the third year this meadow mixture will seem to have less flora than the first and second year.

The perennial species are still young, many will only have germinated in the second season, so flowers will be sparse. However, there should be identifiable foliage and some flowers. In the second and third the native grasses in the soil will have grown and will be emerging so strongly that the meadow will require two cuts, one in Spring and the Second in July or August, the meadow can again be cut in September if the grasses are still growing strong.

Fourth year, established and require one cut.

In the fourth year the perennials in the mixture should be flowering on many stems and starting to clump and spread, again if the grass is still vigorous cut in spring and in August of the fourth year. If the perennials are growing strong there will be no need to cut until July, August or September depending on the fertility and wetness of the soil and the species which have grown. A wildflower meadow should last many years, provided the species established, weeds were controlled and the meadow was cut and the cut material removed and occasional 'Gaps' are created.

Product Name: Bird Attracting Wildflowers Product Code: WF03

Description:

This mixture is ideal for Gardens, Schools, Farms, Estates and Parks, it is often placed to the back of a shorter wildflower meadow for long season effect as it is mid to tall height and requires 1 cut per year often in spring and NOT at the end of summer

WF03 is a designed seed mixtures for those who seek to encourage Birds. Birds will visit in summer and winter (if left uncut) to eat the seeds. This seed mixture will grow in moderately wet or dry soils, sunny or slightly shaded. Indeed any situation. WF03 can be planted as a meadow and is ideally best planted in a sheltered open or very lightly shaded situation in sun where the birds are given some nearby shrubby cover.

As well as being colourful, this mixture is especially designed and blended to provide feed from wild seed head in autumn and winter to attract over 20 of the more common bird as well as provide seed feed for winter migrant birds, such as Greenfinch, Linnet, Chaffinch, Bullfinch and Goldfinch. In summer this mixture will be alive with edible insects for migrant summer visitors such as Warblers. Some of these insects will over winter in the seed heads, further providing protein for winter birds. As WF03 attracts insects, it in turn feeds birds such as Blue Tits, Thrushes and Wrens.

Mixture Specifications:

The maintenance for WF03.

All or most of the area sown with WF03 should not be cut at the end of summer, leave the seed heads on so that the birds, especially finches can search the heads for seeds. It then MUST cut in Spring.

Cut to 10cm or 4 inches no lower.

Origin: Native Irish Origin, Wildflower Seed Mixture. pH range: Suits all soils. Aspect: Sunny to light or semi shade, but not too shaded Life Cycle: Contains Annuals, Biennials and Perennials. Height Range: 120cm - 180cm Flowering Period: May to September. Fertility Range: Will grow on any soil, the less fertile the soil, the less cutting will be required. Wintergreen: Moderate Total number of seeds per gram: 980

Species List:

Birdsfoot Trefoil, Black Meddick, Burdock, Common Vetch, Corn Marigold, Corn Poppy, Corncockle, Cornflower, Cowslip, Devil's Bit Scabious, Field Scabious, Fleabane, Foxglove, Greater Trefoil, Hedge Garlic Mustard, Hemp Agrimony, Kidney Vetch, Lady's Bedstraw, Lesser Knapweed, Marjoram, Scented Mayweed, Meadow Vetchling, Meadowsweet, Ox-eye Daisy, Purple Loosestrife, Ragged Robin, Red Campion, Red Clover, Ribwort Plantain, Shepherds Purse, Sorrel, St Johnswort, Teasel, Wild Angelica, Wild Carrot, Yarrow, Dames Violet, Wood Sage

Seed Sowing Rates:

Normal sowing rates: Pure wildflowers - no grass no annuals: 1 to 1.5 grams per metre. **Grass seed or nurse crop requirement:** Nurse Crop: A nurse crop is not required

Product Code: EC03 Product Name: Woodland Wild Flower Mixture

Woodland wildflowers are not the easiest to establish, but are one of the most rewarding of all seed mixtures for the difficult conditions of low light levels in woodlands. Woodland mixture flower mostly in spring/ early summer and only a few flowers appear from June/July onwards. This mixture will thrive in dappled light under broadleaved trees and is more difficult to establish under conifer trees

The Bluebells seeds in this mixture are native Irish and slow to develop bulbs and then to flower. Primsrose and Violets also take some years to grow and spread. **Species List:** Code EC03 Woodland Wild Flower Mixture

Bluebell, Burdock, Dog Violet, Cowslip, Devils Bit Scabious, Foxglove, Hedge Garlic Mustard, Lesser Knapweed, Meadowsweet, Ramson, Red Campion* Ribwort Plantain, Sorrel, Upright Hedge Parsley, Wild Angelica, Wood Avens, Hemp Agrimony, Hoary Plantain, Primrose, Sweet Violet, Wood Sage

species which may be added: Pokeweed, Cow-Parsley, Wood Sanicle*, Welsh Poppy* Bluebell (Germinates year 2 or 3, flowers by year 4 to 6, Primrose, Sweet Violet and Dog Violet germinate in year 2 or 3, flowers by year 4.

Morphology:

Life Cycle: Biennial & Perennial. Height Range: <30cm to >100cm. Flowering Period: March and April to June.

Fertility Range: Will grow in very fertile soil to poor, if very infertile apply fertiliser. Wintergreen: In sheltered woodland.

The main species which should dominate and persist in this mixture if kept free of grass and not cultivated. Bluebell, Cowslip, Devils Bit Scabious, Hemp Agrimony, Hoary Plantain, Cow-Parsley, Ramsons, Red Campion, Wood Avens,

Biennial Species: Alexanders, Burdock, Foxglove, Mullein, Hedge Garlic Mustard, Upright Hedge Parsley, Wild Angelica, Wild Carrot, Welsh Poppy. **Rare, unusual, and feature species**: Primrose, Wood Sanicle, Welsh Poppy, Wood Sage,

Species which will grow if the conditions are ideal: Sweet Violet, Dog Violet. Species which will be affected by management: Primrose, keep weed free until established, Primula species will germinate in the second or third year after sowing. Additional species which could be added to this mixture as individual species of seeds or plants are any woodland species, in particular Yellow Pimpernel, Bugle and Wood Rush.

Design Notes: Do not sow with grasses, This mixture will not require a nurse crop. Woodland wildflowers will not flower in the first year. Some species are very slow to appear. You will have to wait for 3 years for the bluebells to flower but they do germinate easily, when they germinate they look like Chives. EC03 is subject to limited availability. Please order well in advance. If sowing into sunny open woodland conditions seek advice. EC03 is a difficult mixture to grow. The area must be prepared and managed to the highest standards. Try to eliminate all nettles, Ivy and bramble by cutting or strimming the area. Many species in this mixture are not 'Browse' resistant when germinating.

Sowing Specification: As Normal, roll or rake into surface to keep out of reach from birds.

Soil Preparation: Normal, create fine tilt on seed bed,

Optimum Sowing Time: Autumn after leaf fall or spring.

Sowing Conditions: Normal

Sowing Method: By hand is recommended, if using seed spreaders be careful to insure the small varieties of seed do not drop to the bottom of the seed spreader and get sown all in the one place. Can be Hydrasown.

Fertiliser: None. Unless in conifer wood or where leaf litter has been removed in old woodland. Powdered or liquid seaweed will aid germination Seed Sowing Rates: 1.5 grams per metre.

Normal sowing rate 'without added grass seed': 1.5 grams per metre. High sowing rate 'without added grass seed': Add 3 grams per metre. Low sowing rate: 1 gram per metre for clean soil over large areas..

Nurse Crop: No nurse crop is required. Grass Seed Requirement: None. Sow with or without grasses.

Seed Specification:

Once sown this mixture in normal conditions (mainly in early Autumn and Spring) should germinate 6 weeks after sowing, from then on provided the woodland floor is kept open and a 'Thatch' is not allowed develop, species will continue to germinate and emerge, through to the third year.

Up to 40% of all seed should germinate in the first year. Up to 60% of all species should germinate in 24 months. Up to 80% of all species should have flowered by the fourth year after sowing. Late Autumn and early Summer sowings may be slow to emerge, depending on the weather.

Performance: The first year is the critical year to maintain this meadow, as only a few species will be germinating, and some of those that do, will be slow growing, so keep it weed free of known weeds such as nettles. Persistence if unmanaged: High Tolerance of Cutting: Low. General Cutting Time: None required.

Specific Cutting Time: Wait 3 weeks until after the last flush of flowers fades away, after seeds set in July.

Management: Control weeds, ensure the leaf litter remains on the forest/woodland floor. Shelter can be cheaply provided by planting cutting of Elderberry and Wild Raspberry.



Bluebell Hollow

Planting of Bluebell bulbs by Keppel at Citywest.Scientific name;Hyacinthoides scripta)Irish Name;Coinnie corra



Wildflower mix proposed by Keppel in 2020



B Tall wildflower mix WF03 to the back





WF01





Wildflower mix proposed for two attenuation hollows bv **Inland Fisheries in 2020**



This All-Ireland Pollinator Plan Wildflower Mixture mixture contains some of the very best wildflowers that will attract pollinators in abundance. Most especially GF03 attracts butterfly, native bees and other beneficial garden insects. If required for honey bees cut this mixture in summer, after each flower flush, cut every 4 to 6 weeks. Cut no lower than 4 inches and some species will flower again. Don't let flowers go to seed if solely for honey bees. Honey bees will forage trees and shrubs in spring then bees move to wildflowers for summer. GF03 is also one of the best butterfly attracting wildflower seed mixture esp' for 16 summer Butterfly species. In Ireland there are 32 native butterflies, this mixture is designed to attract 16 of the more common species. Encouraging fine grasses greatly assists butterflies and this mixture will compete with native grasses GF03. GF03 it is best planted in an open situation where the butterflies will bask in the sun. GF03 is a special mixture for any normal soil, moist or dry, but will perform best where there is some soil/moisture retention and the soil doesn't dry out too fast, Suitable for most soils that are not overly acid or alkaline. Tolerates semi-shade but best in full sun

Mixture Specifications:

pH range: Suits all soils. more to the moist range. Aspect: Sunny. Life Cycle: Contains Cornfield Annuals, Perennials and Biennials Height Range: 40cm - 160cm . Flowering Period: May to September.

Fertility Range: Will grow on any soil, the less fertile the soil, the less cutting will be required. Wintergreen: Moderate **Species List:**

Birdsfoot Trefoil, Black Meddick, Cowslip, Devil's Bit Scabious, Meadow Buttercup, Field Scabious, Hemp Agrimony, Kidney Vetch, Lady's Bedstraw, Lady's Ann lace, Lesser Knapweed, Meadowsweet, Mullein, Ox-eye Daisy, Purple Loosestrife, Ragged Robin, Red Campion, Red Clover, Ribwort Plantain, Rough Hawksbit, Sorrel, St Johnswort, Wild Angelica, Wild Carrot, Yarrow, Yellow Agrimony, Yellow Rattle, Teasel and more. Also includes 35% annuals: Corn Marigold, Corn Poppy, Corncockle, Cornflower, Scented Mayweed,

