Flintshire County Council

Planters for Pollinators





Version 2.0

April 2025

Prepared by LUC

Ariennir gan Lywodraeth Cymru
Funded by Welsh Government

CYNGOR Sir y Fflint Flintshire COUNTY COUNCIL

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Bee Friendly

Document control

Version	Status	Prepared	Checked	Approved	Date
01	For review	BW	JWA	JWA	09.04.2025

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FS566056 OHS627041 EMS566057

Land Use Consultants Limited

Registered in England. Registered number 2549296.
Registered office: 250 Waterloo Road, London SE1 8RD.

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Introduction

Introduction

1. ‘Planters for Pollinators’

1.1 The Planters for Pollinators guidance aims to provide practical tips and examples for addressing pollinator decline through planting in the urban environment. The guidance promotes the creation of high-quality, manageable and sustainable planters that can be introduced throughout Flintshire via simple and replicable steps. Introducing Planters for Pollinators in the urban environment will create stronger and better connected habitat networks for pollinators, whilst also enhancing the public realm for local communities.

1.2 The ‘Planters for Pollinators’ guidance covers:

- Best Practice: An overview of the key guidance documents and information relevant to planting, establishment and management for pollinators.
- Selection: An overview of the various types of planters available and tips to analyse a site to select an appropriate planter. Detailed information on plants suitable for urban planting based on their benefit to pollinators, suitability to thrive in planters and reduced maintenance requirements.
- Establishment: Key aspects to prepare a planter and techniques to successfully establish plants.
- Management: Key aspects to consider and observe when monitoring the planters, as well as key maintenance tasks.
- Further Information: A summary of the key considerations and additional information such as funding opportunities and further research.

1.3 This guidance supports and encourages Local Authorities, town and community councils, local businesses and community groups to become involved in greening the urban environment and supporting pollinators.

1.4 Tell Flintshire about the planters you have created by scanning the QR code and completing the survey. Planters will be mapped to help understand and build local pollinator networks.

Importance of the Guidance

Figure 1. Pollinator friendly planters in Flintshire



Why is this Guidance Needed

1.5 Pollinators are extremely important: as noted by Natural Resource Wales, every third mouthful of food we eat is created by pollinators. If pollinators are lost it would cost approximately £1.8 billion to hand pollinate crops. The vibrancy and ecological functions of our rural and urban spaces would be greatly diminished.

1.6 Pollinators are most commonly identified as bees, but they also include a wide variety of other insects such as flies, wasps, beetles and butterflies. Pollinators transfer pollen between flowers whilst collecting nectar, fertilising the plants so that they can produce seeds and fruit. Without pollinators, plants cannot reproduce.

1.7 Natural Resource Wales also notes that half of the UK's 27 bumblebee species are in decline, with 3 species already extinct. Two-thirds of moth and butterfly species are in long term decline with 10 of the 43 Welsh butterfly species in severe decline, with 63% of the overall Welsh butterfly population declining and 28% of Welsh moth populations are severely declining.

1.8 The Action Plan for Pollinators in Wales identifies several areas that are leading to accelerated loss of pollinators, which includes:

- Land use intensification: Approximately 80% of the land in Wales is used for agriculture, with over 60% of that being pasture land. The intensification of this land class has reduced the scrub and wildflower edges that pollinators rely upon as part of their habitat network. Over 15% of Wales now also consists of urban areas, which is made of large areas of hard standing.

Figure 2. Example of fragmented urban environments lacking pollinator support



- Chemical use: There are a number of fertilisers and pesticides used to support intensive farming in Wales that threaten pollinators. There is a difficult balancing act required between crop success and protecting biodiversity and natural ecosystems.
- Habitat loss and fragmentation: There has been a significant loss of grassland, heathland and wetland habitats in the last 60 years, with urban expansion and new land sealing such as parking. This loss and fragmentation has reduced the number of wildlife corridors that pollinators can use to provide food sources.
- Climate change: Climate change can affect the abundance of food, time of flowering and the success of planting. This alters the environmental cues that pollinators rely to inform their life cycle and may increase periods of starvation through lack of food sources.

1.9 Annual bedding plants have long been used in municipal planters and flower beds across urban environments, though they are not a sustainable way to green our urban environments. Annuals have to be replanted every year, which increases climate impacts compared to perennials due to stock needing to be grown and delivered to site each year. Implementation costs increase as soil needs to be prepared and plants watered to ensure they become well established. Maintenance costs increase as plants are removed at the end of their growing season.

Figure 3. Example of existing annual bedding plants in municipal planter, Flintshire



1.10 This guidance moves away from the use of annuals as the primary plant in the urban environment to perennials, which provide more sustainable and reliable food sources for pollinators. Perennials are:

- Long-lived: Perennials come back year after year reducing the need to frequently replace plants compared to bedding plants.
- Require less maintenance: Once established, perennials will require less feeding and watering compared to bedding plants as they have deeper root systems and can be paired with water collection systems.
- More cost effective long term: Reduced maintenance and plant longevity reduces costs in the long-term, though they may cost more to implement. Perennials can also produce seed and can be divided creating new plants for free.
- Pollinator credentials: Pollinator-accredited perennial species lists from the RHS and Welsh Government provide reassurance that plant selection will have a positive impact on local pollinator communities. Some bedding plants are falsely labelled as pollinator-friendly plants to increase sales.
- Habitat Creation: Perennials have longer and overlapping flowering periods throughout the year, which creates more diverse habitats and more stable food sources for pollinators, supporting their life cycles over multiple seasons.

Figure 4. Selection of perennial planters enhancing the urban environment in Swansea



Best Practice

Best Practice & Guidance

2. Guidance & References

2.1 This section highlights a series of best practice documents and resources available in relation to planters for pollinators. These documents provide detailed information that builds on the overview provided in this document, but is not an exhaustive list. Icons have been used to identify specific topics covered in each guidance document, to quickly identify further areas of research. The icons include:

Plant selection or advice

Pollinator information

Planter selection or advice

Maintenance advice

Figure 5. A pollinator friendly planter in Brighton



Welsh Guidance

2.2 There are several Welsh government guidance documents and websites that promote pollinator-friendly practices and ways to engage the community with pollinators and planting. These include:

- Wales Action Plan for Pollinators:
  Actions to halt and reverse the decline of pollinators, with recommendations for creating pollinator-friendly environments in urban and rural area.
- Wales Biodiversity Action Plan:
  Strategies to halt and reverse biodiversity loss, including habitat protection, species conservation, and integrating biodiversity into policy.
- Bee Friendly Scheme:
  Encourages communities, schools, and organisations to create pollinator-friendly spaces, providing resources like the Bee Friendly Action Guide and plant lists.
- Natural Resources Wales:
  Comprehensive guidance on supporting pollinators and effective planting practices, focusing on creating pollinator-friendly habitats and selecting resilient plant species to adapt to climate change.

Figure 6. Wales Action Plan for Pollinators



National Guidance

2.3 There are additional national guidance documents, websites and organisations that provide detailed guidance and practical tips regarding planting and pollinator support. These include:

2.4 National Pollinator Strategy:
Guidance on improving pollinator status over 10 years, focusing on creating diverse habitats with plants that flower throughout the year and promoting public awareness and engagement.

2.5 Habitat Creation and Management for Pollinators:
Detailed advice on creating and managing habitats to support pollinators, enhancing food sources, shelter, and nesting sites. Includes details on seed mix and plant selection, seasonal flowering, sowing and soil fertility for pollinator benefit.

2.6 Soil Association Factsheet:
Addresses population decline of pollinators due to habitat loss and provides information on how to encourage pollinators, pollinator-supporting habitats, pollinator and insect-friendly practices, appropriate mixes and soil type and conditions.

2.7 Royal Horticultural Society (RHS):
The RHS provide extensive scientifically-backed, resources on pollinator-friendly planting, including plant lists, tips for creating habitats that attract and support pollinators, planter maintenance and selection, research into native and non-native planting and ways to avoid pesticide use. The RHS uses its extensive growing facilities, university connections and technical knowledge to scientifically test topics such as plant health, appropriate soil management and sustainable horticulture. This ensures the advice given is effective and reliable.



Selection

3. Planters & Plants

3.1 Introducing Planters for Pollinators with diverse plant selections will improve air quality, enhance the quality of the urban environment, simplify maintenance requirements and allow for planters with unique soil conditions and plant mixes. There are a number of considerations for determining what planter and plant combination should be selected for various scenarios.

- Planters - These are primarily considered in terms of size with a series of reference matrices to help determine which would be appropriate for various site contexts or requirements.
- Planting - A robust palette with detailed selection information is proposed that provides pollinator-friendly plants for a range of conditions and flowering times.

3.2 The following chapter on selection provides tools and information to enable to user to select planters and plant mixes for a variety of conditions.

Figure 7. A pollinator friendly amenity planter in Glasgow

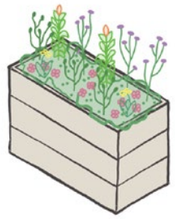


Planters

3.3 Planters come in a wide variety of sizes, materials and forms. Before selecting a planter, an understanding of the context and location, and the requirements of the planter need to be developed. An appropriate planter will need to be selected in response to the following criteria:

- Site Selection: Choose a planter that responds to the site conditions such as setting, light and micro-climate. For example, a planter adjacent to a highway would benefit from being larger to accommodate shrubs and possibly individual trees to mitigate pollution and the heat island effect.
- Material: The material of the planter can affect the plant's health. For example, plastic and metal planters may retain moisture longer than wood planters, but they may be liable to more significant temperature fluctuations if untreated.
- Mobility: Consider if the planter will ever need to be moved or provide hostile vehicle management.
- Aesthetic: Does the planter fit in with the site context, such as a heritage location or provide visual interest in the public realm?
- Drainage/Watering: How will the planter be watered will inform what types of plants might be viable? For example, trees should only be placed in planters with an irrigation system to reduce the risk of failure.
- Budget: Available budget will determine both the scale and type of planter. For example, large metal planters with irrigation systems are expensive, but a medium size planter made of recycled plastic would be more affordable and would allow for wider plant selection.
- Scale of planting: Consider the type of planting that is being proposed. For example, a small planter will work for bulb and perennial mixes, whereas a large planter will be required for larger shrubs or trees.

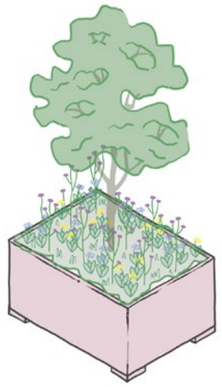
Figure 8. Examples of the various types of planters that can be introduced



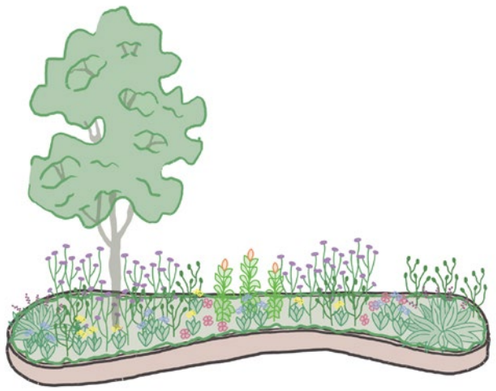
Small planters



Medium planters



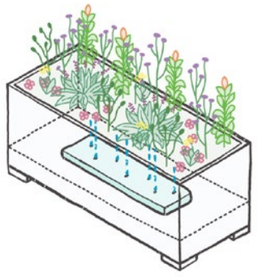
Large planters



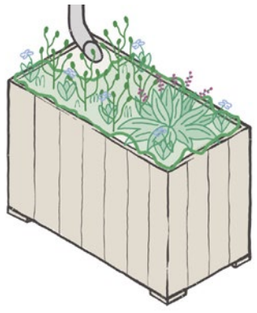
In-ground planters



Amenity planters



Planters with integrated irrigation systems



Self-contained SuDS planters

3.4 Choosing the right planter for the right place is crucial for the health and growth of plants. The following checklist can be used better understand the conditions of a site prior to selecting a planter. A printable version is available in the Appendix.

Table 1. Site appraisal checklist

Conditions	Notes
Location	For example; coastal or waterside, residential areas, outside of a shop, along a high street, next to a road?
Available Space	For example; dimensions of the available space? Is the available space horizontal or vertical?
Light	For example; full sun, partial shade, or full shade? Duration of sunlight throughout the day?
Climate & Weather	For example; average temperatures or risk of frost? High wind exposure? High levels of rainfall?
Accessibility	For example; accessibility for maintenance? Can vehicles approach if required?
Additional Requirements	For example; requirement for integrated seating, integrated irrigation system, temporary planter

3.5 Understanding these conditions will inform what type of planter might be appropriate for a site. For example, a site located adjacent to a road with a lot of available space, a range of full sun and partial shade which would benefit public realm enhancements such as seating, would be the appropriate place for a large planter with integrated seating or an in-ground planter to accommodate tree planting.

3.6 Once the site conditions have been determined, further consideration can be given to the appropriate planter. The planter selection matrix (table 2) will help to build on the appraisal information and identify an appropriate planter. For example, taking the example site appraisal from paragraph 3.5, the selection matrix indicates that large planters would accommodate would accommodate any plant type, but they would likely need to be static or moved by machine and have an integrated water system for plant health.

Table 2. Planter selection matrix

		Small	Medium	Large	In-ground
Type of planting	Bulb				
	Perennial				
	Shrub				
	Tree	✕	✕		
Materials	Wood			✕	✕
	Metal				
	Plastic / Fiberglass				✕
	Brick / Stone			✕	
Mobility	Static				
	Moved by hand		✕	✕	✕
	Moved by machine				✕
Aesthetic	Simple form				
	Custom form				
	Integrated seating	✕			
Drainage / watering	Water system	✕			
	Hand watering			✕	✕
Budget	High				
	Low			✕	✕

Plant Palette

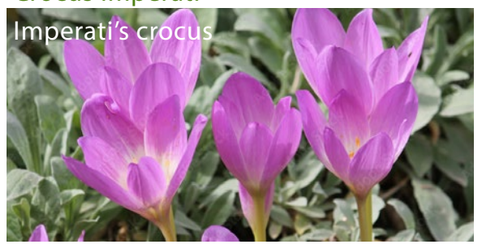
3.7 This planting palette is intended to provide a list of robust and low maintenance species that will provide varying flowering times for year-round food sources and thrive in urban planters. All species listed are also recommended on the RHS 'Plants for Pollinators' species list as well as Welsh Government's 'Bee Friendly' list, which provide much larger planting palettes. If a plant was selected using the RHS or Wales Bee Friendly lists, additional research would be required to ensure the selected plant are robust, low maintenance and work with your proposed conditions.

3.8 The plant palette is organised by season of flowering with additional information that covers:

- Plant Form - Such as bulb, shrub, tree, etc.
- Light Requirements - Such as full sun, partial shade, etc.
- Soil Conditions - Such as well drained, moist, etc.
- Flowering Information - Such as spring only, spring and summer, winter, etc.
- Propagation - Such as seeds, division, cuttings, etc.
- Pollinator Benefits - Such as specific benefits to moth, butterflies or bees or general benefits to all pollinators.
- Maintenance Requirements - Identifies what seasonal maintenance may be required, with indication in the text of required jobs
- Relevant Planter - Illustrates the type of planter that could accommodate the size and type of plant.

Winter Flowering

Crocus imperati



Cormous perennial

Full sun

Moist but well-drained

Winter flowering

Digging and dividing corms in late Summer or early Autumn

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A cormous perennial 10cm high with tufted, shiny dark green leaves with a central silvery-white stripe, and scented flowers, 3-4.5cm long, rich violet-purple inside and pale creamy brown with violet stripes outside, with orange stigmas and stamens, from late winter to early spring; crocuses are a good source of pollen for honeybees early in the season.

Erysimum 'Bowles's Mauve'



Evergreen perennial

Full sun

Well-drained

Winter, Spring and Summer flowering

Hardwood cutting in Spring

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bushy evergreen perennial with narrow, dark grey-green leaves and erect racemes of rich mauve flowers.

Grow in poor to moderately fertile, well-drained soil. Full sun is essential.

Helleborus × ericsmithii



Evergreen perennial

Partial shade

Moist but well-drained

Winter and Spring flowering

Semi-hardwood cutting in late Summer or seed collection

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A hybrid between H. x sternii and H. niger, evergreen, about 38cm tall, with leathery, dark greyish-green leaves to 15cm long. Large white or pale pink saucer-shaped flowers, tinged green, are produced singly or in pairs, on short pink stems, from midwinter to mid spring.

Sarcococca confusa



Evergreen shrub

Partial shade / full shade

Moist, well-drained

Winter flowering

Division early Spring or seed collection

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bushy evergreen shrub, with glossy, deep green ovate leaves, and in winter, scented creamy-white flowers followed by glossy back berries. Avoid planting in the full sun.

Spring Flowering

Ajuga reptans



Evergreen perennial

Partial shade

Moist but well-drained / poorly-drained

Spring and Summer flowering

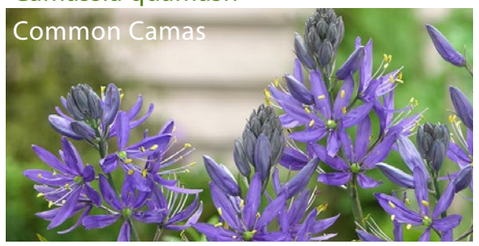
Division in early Spring or Autumn, or cuttings in Summer

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

Spreading stoloniferous perennial to 15cm in height, forming a wide mat of dark green, spoon-shaped leaves, with erect spikes of dark blue flowers in late spring and early summer.

Camassia quamash



Bulbous perennial

Full sun / partial shade

Moist, well-drained

Spring and summer flowering

Seed collection to divide bulbs in early Autumn or Winter

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

Hardy bulbs that produce star shaped flowers, and can reach 90cm tall. They thrive when densely planted, providing a bright display in your planter.

Camassia does best when planted in Autumn, and provide a nice display once spring bulbs have finished flowering.

Centranthus rubur



Woody-based perennial

Full sun

Well-drained

Spring, Summer and Autumn flowering

Seeds collection or cuttings in Summer

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A woody-based perennial, with grey-green leaves and dense clusters of crimson, pink or white fragrant flowers, from late spring to autumn.

Grow in well-drained soil that is poor to moderately fertile, ideally a chalky or stony soil. Great drought resistance, needs full sun to flower well.

Euphorbia amygdaloides



Evergreen perennial

Partial shade

Moist but well-drained

Spring and Summer flowering

Cuttings in Spring or Summer, or division in early Spring

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bushy, evergreen perennial with reddish green stems and matt green leaves, which can be reddish beneath and become darker in the winter. Yellow clusters of flowers in spring and summer.

Fritillaria meleagris

Snake's Head



Bulbous perennial

Full sun / partial shade

Moist, well-drained

Spring flowering

Dividing bulbs in late Summer or seed collection

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bulbous perennial to 30cm in height, with lance-shaped, greyish-green leaves and 1-2 nodding, bell-shaped purple flowers, the petals tessellated with pale pink in a checkerboard fashion.

Widely naturalised in Britain, but probably not a true native. Grows well in fertile humus-rich, well-drained soil.

Hyacinthoides non-scripta

Common Bluebell



Bulbous perennial

Partial shade

Moist but well-drained

Spring flowering

Divide bulbs in late Summer or early Autumn or seed collection

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A vigorous, clump-forming bulbous perennial about 20-40cm tall, with linear, glossy dark green leaves to 45cm long, with bellshaped blue flowers in early spring.

Hyacinthoides does best when planted in moderately fertile, humus-rich, well drained soil that does not dry out.

Primula veris

Common Cowslip



Herbaceous perennial

Full sun / partial shade

Moist, well-drained

Spring flowering

Division in early Spring or seed collection

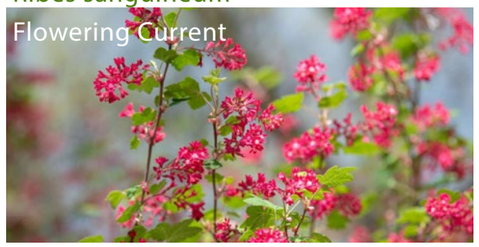
Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

Vibrant yellow flowers and unique look, this semi-evergreen perennial is a great choice for a planter. It can grow up to 25cm tall, providing an early source of nectar for a variety of pollinators at a vital time of their year.

Ribes sanguineum

Flowering Current



Deciduous shrub

Full sun

Moist but well-drained

Spring flowering

Softwood cuttings in Spring or hardwood cuttings in winter

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A vigorous deciduous shrub with lobed, aromatic green leaves, and pendant racemes of reddish-pink tubular flowers in spring, followed by blue-black fruit.

Easy to grow in moderately fertile, well-drained soil in full sun.

Summer Flowering

Rosmarinus officinalis



Evergreen shrub

Full sun

Well-drained

Spring and Summer flowering

Stem cuttings in late Spring to early Summer

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bushy, evergreen shrub with aromatic, linear, dark-green leaves with pale felty undersides. Flowers are pale violet-blue and white, flowering in mid-spring to summer with occasional flowers in autumn.

Grow in poor to moderately fertile, well-drained soil in sun.

Muscari armeniacum



Bulbous perennial

Full sun / partial shade

Moist but well-drained

Spring flowering

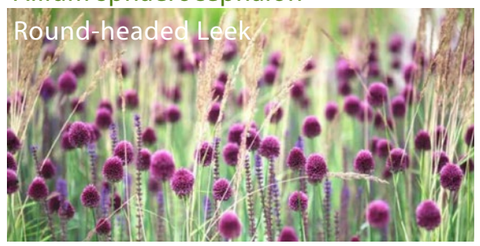
Divide bulbs in Autumn

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A strong-growing bulbous perennial to 20cm in height, with narrow, arching green leaves and erect stems bearing dense spikes of white-tipped, deep violet-blue, egg-shaped flowers 5mm in length in spring.

Allium sphaerocephalon



Bulbous perennial

Full sun

Moist but well-drained

Summer flowering

Divide the bulbs in late Summer to early Autumn

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A tall perennial with a tuft of narrow basal leaves to 30cm long, and long-stalked, dense, rounded heads of pink or reddish-brown flowers in summer.

Angelica archangelica



Herbaceous perennial

Partial shade

Moist but well-drained

Summer flowering

Divide mature plants in Autumn and seed collection

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A robust upright perennial about 2m tall, often grown as a biennial, with 2- to 3-pinnate, mid-green leaves to 60cm in length, and rounded umbels to 25cm across of greenish to pale yellow flowers in early and midsummer.

Bistorta officinalis ‘Superba’



Herbaceous perennial

Full sun / partial shade

Moist, well-drained

Summer and Autumn flowering

Bulb division in Spring or Autumn or seed collection

Beneficial to a wide range of pollinators

Winter	Spring	Summer	Autumn

A semi-evergreen perennial which displays pink/purple and white spiked flowers on erect stems.

It does well in most soil types, but does thrive best in moist soils. It is an attractive choice for planters with its unique shape and form.

Campanula latifolia



Herbaceous perennial

Full sun / partial shade

Moist but well-drained

Summer flowering

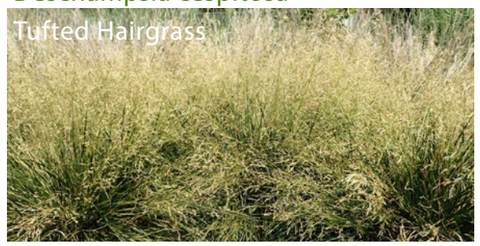
Cuttings in early Spring or divide the plants in Autumn

Beneficial to a wide range of pollinators

Winter	Spring	Summer	Autumn

An erect, clump-forming perennial to 1.2m tall, with oval leaves and loose racemes of nodding bell-shaped violet-blue flowers 5cm long in summer.

Deschampsia cespitosa



Evergreen grass

Full sun / partial shade

Moist but well-drained

Summer flowering

Divide mature clumps in early Spring or Autumn

Beneficial to a wide range of pollinators

Winter	Spring	Summer	Autumn

An evergreen grass forming a neat tussock of narrow, leathery, dark green leaves to 60cm long, with feathery panicles of silvery-purple flowers on arching stems in summer.

Dipsacus fullonum



Branched biennial

Full sun / partial shade

Well-drained / moist / poorly-drained

Summer flowering

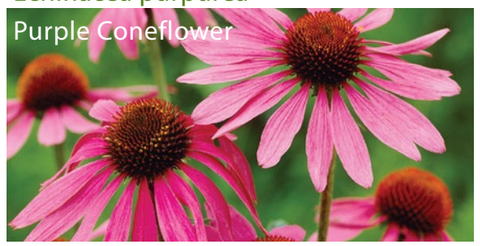
Divide rosettes in Spring and seed collection

Beneficial to a wide range of pollinators

Winter	Spring	Summer	Autumn

A branched, upright biennial, to 3m. Foliage is bright green, prickly on lower mid-ribs, the stem leaves joined at the base to cup the stem. Flowerheads, to 6cm long, are stiffly bristly, with tiny blue flowers appearing in a band round the flowerhead over an extended flowering time. Plant remains intact throughout winter, and seedheads attract goldfinches.

Echinacea purpurea



Herbaceous perennial

Full sun / partial shade

Well-drained

Summer and Autumn flowering

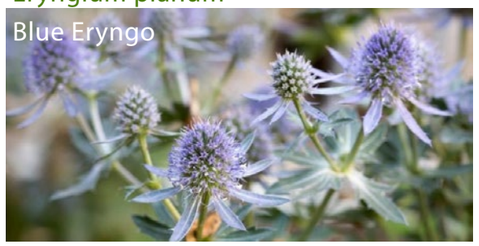
Seed in cold frame, cuttings and division in spring

Beneficial to all pollinators, specifically butterflies



An erect, clump-forming perennial to about 1.5m tall, with coarsely hairy lance-shaped mid-green basal leaves to 15cm long, and solitary long-stalked daisy flower heads with prominent conical central disks, especially attractive to butterflies.
Grow in well-drained humus-rich soil ideally in full sun.

Eryngium planum



Herbaceous perennial

Full sun

Well-drained

Summer and Autumn flowering

Seed in cold frame, cuttings in late winter or by division in spring

Beneficial to a wide range of pollinators



A perennial, bushy plant known for its striking blue flowers and spiky foliage. It thrives in full sun and prefers well-drained soil. Flowering typically occurs from mid-summer to early autumn, providing a long-lasting display of colour. Propagation can be achieved through seed sowing or division in spring. Eryngium planum is highly beneficial for pollinators, the flowers are a known magnet for bumble bees, honey bees and solitary bees.

Geranium macrorrhizum



Herbaceous perennial

Full sun / partial shade / full shade

Moist but well-drained

Summer flowering

Divide the plants in early Spring or Autumn

Beneficial to a wide range of pollinators



A mat-forming semi-evergreen perennial growing to 45cm tall, with magenta-pink flowers up to 3cm across, held above the foliage on upright stems.

Useful as it is one of the few plants that can tolerate dry shade. Will grow in any, moderately fertile soil apart from waterlogged soils. Full sun or any type of shade.

Hylotelephium spectabile



Succulent perennial

Full sun

Well-drained

Summer flowering

Divide the plants in Spring or take stem cuttings in Summer

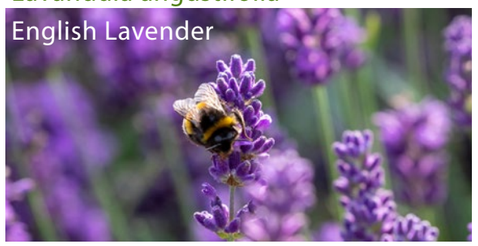
Beneficial to a wide range of pollinators



A herbaceous perennial, to 45cm with thick erect stems bearing grey-green leaves and starry pink flowers, in flat terminal clusters to 15cm across in late summer.

Grow in moderately fertile, well-drained soil in full sun. A drought tolerant plant attractive to bees.

Lavandula angustifolia



Semi-evergreen shrub

Full sun

Well-drained

Summer flowering

Seed collection

Beneficial to a wide range of pollinators



Lavender is an easy grow, perennial plant that will do well in planters situated with other shrubs and plants.

Lavender thrives in well-drained soil with plenty of sunshine, but is not overly tolerant of shade, very wet or freezing soils so it is important to situate them appropriately with these factors in mind.

Perovskia 'Blue Spire'



Deciduous shrub

Full sun

Well-drained

Summer and Autumn flowering

Cuttings in late Spring, division in Spring or seed collection

Beneficial to a wide range of pollinators



A small, upright deciduous shrub to 1.2m, with white stems bearing deeply-divided grey-green leaves. Small violet-blue flowers appear in late summer / early autumn.

Grows well in poor, well-drained soils in full sun.

Phlox paniculata



Herbaceous perennial

Full sun / partial shade

Moist but well-drained

Summer and Autumn flowering

Stem cuttings in Spring or division in Autumn

Beneficial to a wide range of pollinators



An upright perennial to 1.2m high with stems carrying broadly lance-shaped, slightly toothed leaves. Pink, purple or white flat-faced flowers, often strongly scented, are grouped in domed clusters and borne atop the leafy stems from mid- to late summer.

Salvia officinalis



Evergreen shrub

Full sun

Moist, well-drained

Summer flowering

Stem cuttings in late Spring or early Summer

Beneficial to a wide range of pollinators



A bushy, spreading evergreen shrub, with aromatic, finely-veined, grey-green oblong leaves and short spikes of pale blue flowers in early summer. Thrives in a sunny spot, in moderately fertile soil with good drainage.

Scabiosa succisa



Herbaceous perennial

Full sun / partial shade

Moist but well-drained

Summer flowering

Divide mature plants in early Summer

Beneficial to a wide range of pollinators



A compact, rounded shrub up to 75cm in height, with white centred, pale pink flowers across summer.

Will grow well in poor soils, but requires full sun and shelter.

Autumn Flowering

Ceratostigma plumbaginoides



Herbaceous perennial

Full sun

Moist but well-drained

Autumn flowering

Stem cuttings in early Summer or divide the plants in Spring

Beneficial to a wide range of pollinators



A low-growing, mat-forming herbaceous perennial with spreading roots, bearing oval-shaped green leaves turning red or purple in the autumn. Clusters of rich blue flowers appear from late summer.

Symphyotrichum novi-belgii



Bushy, Clump forming

Full sun / partial shade

Moist but well-drained

Autumn flowering

Divide the plants in early Spring or seed collection

Beneficial to a wide range of pollinators



A clump-forming, herbaceous perennial with narrow, lance-shaped mid-green to purple foliage and masses of daisy-like flowers in shades of purple, lavender-purple or white with yellow centres, which generally appear in the autumn.

Heights can vary between 30cm and 180cm with many cultivars having a good resistance to powdery mildews.

Flowering Trees

Crataegus monogyna



Deciduous tree

Full sun / partial shade

Moist but well-drained / well-drained

Spring flowering

Graft in winter to early Spring or collect seeds

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A rounded deciduous tree to about 10m in height, with thorny branches and glossy, deeply lobed dark green leaves, colouring gold in autumn. Flat sprays of fragrant, creamy-white flowers with pink anthers, are produced in late spring, followed by plentiful dark red edible berries in autumn. The fruit can be made into jellies or used for making herbal tea.

Laurus nobilis



Evergreen shrub

Full sun / partial shade

Well-drained

Spring flowering

Cuttings in late Spring or by root division in Spring

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

Bay is a large evergreen shrub, and in the context of a planter can be turned into topiary, which means it can be 'trained' into shape, making it more suitable in a planter.

Pruning and trimming can take place in spring and summer to achieve the desired shape and size. Plant the tree in well-drained soil and ensure it is regularly watered.

Prunus avium



Deciduous tree

Full sun

Moist but well-drained

Spring flowering

Stem cuttings in Summer or graft in Winter

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A spreading, deciduous tree with nodding clusters of pure white flowers 2.5cm wide in late spring, followed by small, shiny red-purple fruits; dark green leaves, bronze when young, turn orange and red in autumn. Many cultivated varieties of cherry have been bred from this species.

Salix aegyptiaca



Deciduous shrub

Full sun

Moist but well-drained / poorly-drained

Spring and Winter flowering

Hardwood cuttings in late Winter or early Spring

Beneficial to a wide range of pollinators

	Winter	Spring	Summer	Autumn

A bushy shrub or small tree with red-purple shoots and oblong, dark green leaves up to 15cm long. Fragrant, silvery, male and female catkins are borne on separate trees in late winter or early spring, before the leaves open. Male catkins are up to 4cm long with bright yellow anthers; female catkins up to 8cm long.

Establishment

Establishment

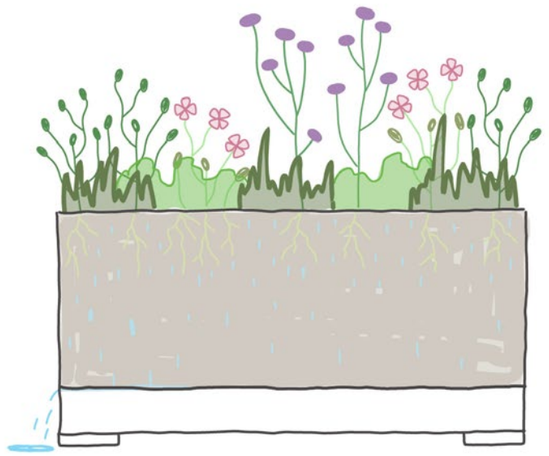
4. Successful Planters

4.1 The 4 key areas to consider when establishing a planter are drainage, watering, soil and planting.

Drainage

1. Planters need adequate drainage that will not become easily blocked. Drainage holes are the most common form of drainage, which avoids waterlogging and potential damage to the planter. Overflow pipes are usually part of an integrated watering system.
2. Using a geotextile membrane on the inside of the planter will help to filter the water and prevent soil from being washed away or blocking the drainage hole. The composition of the soil is also a key factor in the rate and ability of a planter to drain excess water, which is covered in the following pages.
3. Planters situated on hardstanding will have a solid base with drainage holes. This should be raised off the ground a minimum of 1cm to encourage air flow, drainage and prevent corrosion or decomposition of the planter. Planters on soft landscape can be placed directly on the ground as they tend to have open bases that allow water to drain freely into the ground.

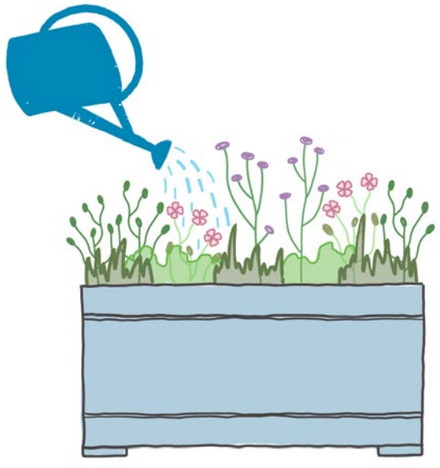
Figure 9. Examples of successful drainage in a planters



Watering

1. Planters require appropriate watering to ensure plants establish well and do not fail. As mentioned in Section 3, planters can either be watered by hand or include integrated irrigation/watering systems. Hand watering is the simplest way, but it requires regular visits if it is dry for a prolonged period. This needs to be factored into planter and plant selection to ensure the appropriate plants thrive if regular watering is not achievable.
2. Irrigation systems can be either digital or manual. Digital systems use a timer or moisture sensor to adjust the water supply, offering maintenance-free watering. These can be costly and are best for schemes with multiple connected planters. Manual systems are controlled by taps, which may not be practical in many settings but could work well in places like schools or offices with an outside tap.
3. Wicking systems are buried under the plant roots and filled from the surface with rainwater or manually during dry spells. They release water slowly into the soil, reducing the risk of waterlogging. High-budget planters may have integrated wicking systems with large tanks and overflows, while low-budget planters can use terracotta pots sat in the soil for slow-release watering, reducing the reliance on repeat manual watering.

Figure 10. Various options for watering planters



Soil

1. Selection of appropriate substrate for planters will impact how plants grow and survive, especially in changing climate conditions. Planters benefit from lightweight porous soils that retain water but allow drainage. Topsoil generally is not used in planters as it is denser, retains too much moisture and may lack appropriate nutrients. If topsoil is the only available substrate, plants should be selected appropriately and the soil should be mixed with compost in a minimum 75% topsoil 25% compost mix, to enrich and improve the soil structure. Locally produced compost and peat free soils should always be used.
2. Soil additives can change the soil structure and consistency as required. Sand and gravel can be added to the soil to improve aeration and drainage capacity. Compost or other natural fertilisers can be added to the soil to improve nutrient levels and moisture retention.
3. Plants require different soil conditions, and they should be grouped in planters with other plants that also prefer these conditions. For example, free-draining soils benefit plants that prefer drier conditions such as lavender, whereas moisture retentive soils will benefit plants such as Primula vulgaris. This plant would likely struggle in the same planter as conditioned would favour one species over the other. Planters with various soil conditions can be grouped together to increase the plants variety and pollinator value.

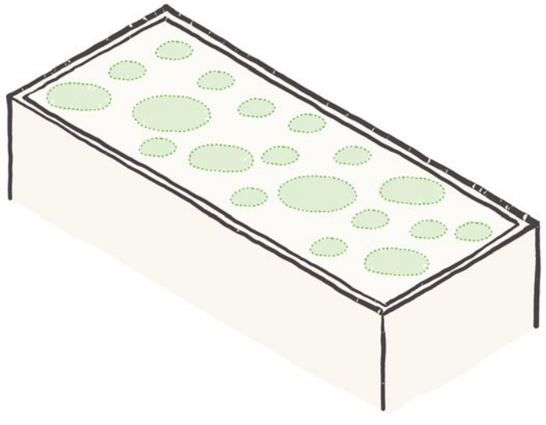
Figure 11. Examples of the various types of soil



Planting

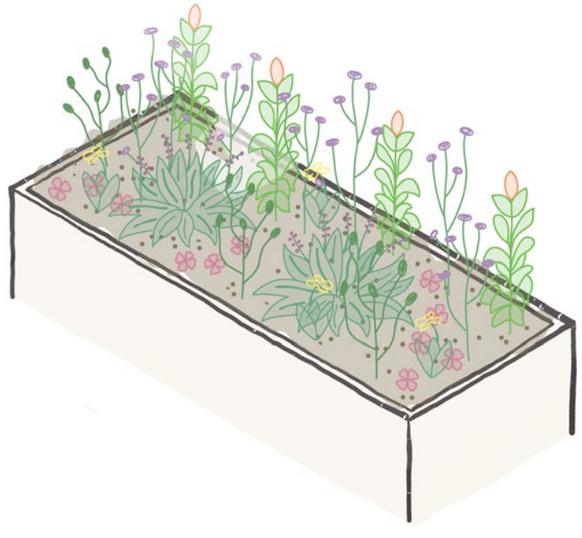
1. Successful, diverse, long-term plant displays require good soil preparation, planting and aftercare. Before planting inspect the health of your chosen plants to ensure the best quality and condition. Look for light-coloured roots, circling if grown in a pot, signs of any pest or disease and leaf colouration or spots. Remove any damaged or dead material prior to planting .
2. Arrange plants before planting based on their mature size, growth habits and requirements, as plants without adequate space and light may fail. Layouts should provide a year-round food source and succession of flowering interest, reducing the risk of bare soil and weeds. Taller plants should be placed in the centre or back, with shorter plants around them. Consider the proximity to trees or other structures that might affect light, available moisture, and space. Bulbs can be used to fill empty spaces.
3. When planting perennials, dig a hole that are slightly larger than the roots of your plants. Remove plants from containers and tease out roots in 3 or 4 locations to encourage new root growth. Firm the soil around the roots, and add plant supports if necessary. Tree planting will depend on the size of tree and how it is supplied, and whether it will be in a planter or have soft landscape below it. Adding Mycorrhizal fungi to the tree root planting area is beneficial for improving nutrient and moisture intake. Follow suppliers' information when planting trees.

Figure 12. Examples of successful planting techniques



4. Water the plants thoroughly after planting to settle the soil. Apply mulch to retain moisture, suppress weeds, and regulate soil temperature. Grouping containers can help protect them from extreme temperatures or conditions.
5. Perennials are best planted in spring (March to early May) or autumn (late September to October), while conditions are moist. Using container grown stock can extend this window as long as freezing, waterlogged or extreme heat conditions are avoided. Trees should always be planted between October and April when tree growth is slowed, which reduces the risk of failure or stress on the plant.
6. The material of the planter can affect the plant's health. For example, plastic and metal planters may retain moisture longer than wood planters, but they may be liable to more significant temperature fluctuations. This will need to be considered when picking plants and soils. If the planter needs to be moved then a smaller planter with lightweight soil will be required. If the planter will be static or be used as hostile vehicle barriers, then weight of soil and construction can be increased.

Figure 13. Examples of successful planting techniques



Management

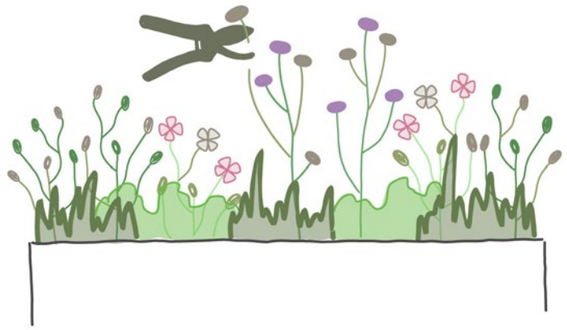
5. Sustained Planters

5.1 The 4 key areas to consider when maintaining a planter are plant care, soil condition, cleanliness and propagation.

Plant Care

1. Watering is a key maintenance task, especially during dry periods. Check moisture levels by sticking your finger 4-5 cm into the soil. If it feels dry, water the planter. Water early in the morning or late in the evening to minimise evaporation, reduce temperature stress, and allow foliage to dry, which reduces disease risk.
2. Feeding plants provides essential nutrients and supports healthy growth in restricted soil volume. Apply feed through watering to deliver nutrients directly to the roots. Start feeding six weeks after establishment and follow planting label instructions for feeding throughout the season.
3. Pruning dead, diseased, or selectively removing parts of plants improves health, productivity, and appearance. Consider form, light, air circulation, and flowering/fruiting needs when pruning. Prune most plants between late winter and early spring before new growth.
4. Dead or diseased parts of plants can attract pest and disease, which should also be monitored during maintenance. Common pest control methods include hand removal, dislodging with water spray, and introducing beneficial insects.

Figure 14. Examples of successful plant care



Soil Condition

1. Maintaining the quality of soil will promote plant health and longevity or the plants. During maintenance inspect the soil for signs of compaction, poor drainage or inconsistent growth patterns amongst the plants. Also check for signs of pests of disease in the soil as early intervention can stop damage to existing plants.
2. Adding organic matter such as composts or mulch to the soil surface will improve soil health and introduce the required nutrients, reducing the reliance on feed. Apply mulch as minimum 5cm layer on top of the existing soil to retain moisture, suppress weeds, and improve soil structure.

Cleanliness

1. Clean planters to reduce the risk of pest and disease, ensure plant health and create a more attractive public realm. Use water to wash away any dirt or build up on the outside.
2. Debris and rubbish should be collected and disposed of from the planter. If a tree is present and the facilities allow, leaves can be collected and stored to create compost. Any tools used to maintain the planter should also be kept clean to reduce the risk of disease spreading.

Figure 15. Examples of soil conditions and planter cleanliness



Propagation

1. A benefit of using perennials instead of annuals is the ease in which they can be propagated. Seed collection is one of the easiest and most engaging ways this can be done. Seeds are generally ready to collect at the end of the growing season when seed heads are browning, pods begin to open and the seeds are firm. Some seeds may not be ready to harvest till the following spring, but these provide food sources for birds over winter. Seed collection should always be done on a dry day and individual sowing requirements should be researched.
2. Cutting are another way in which plants can be propagated, though not all plants take from cuttings. Perennials cuttings most commonly come from softwood cuttings are taken in spring to early summer from new and flexible growth, which should root well. Trees and deciduous shrubs can be propagated from hardwood cuttings, which are taken in early winter from mature, wood stems that take longer to root.
3. Division is required every 4 to 5 years to ensure planters do not become crowded. This is done in spring or autumn through digging up the root ball of the existing plant and dividing it into multiple pieces with their own shoots and root systems. Division helps to maintain plant health whilst providing new plants for free.

Figure 16. Examples of plant propagation

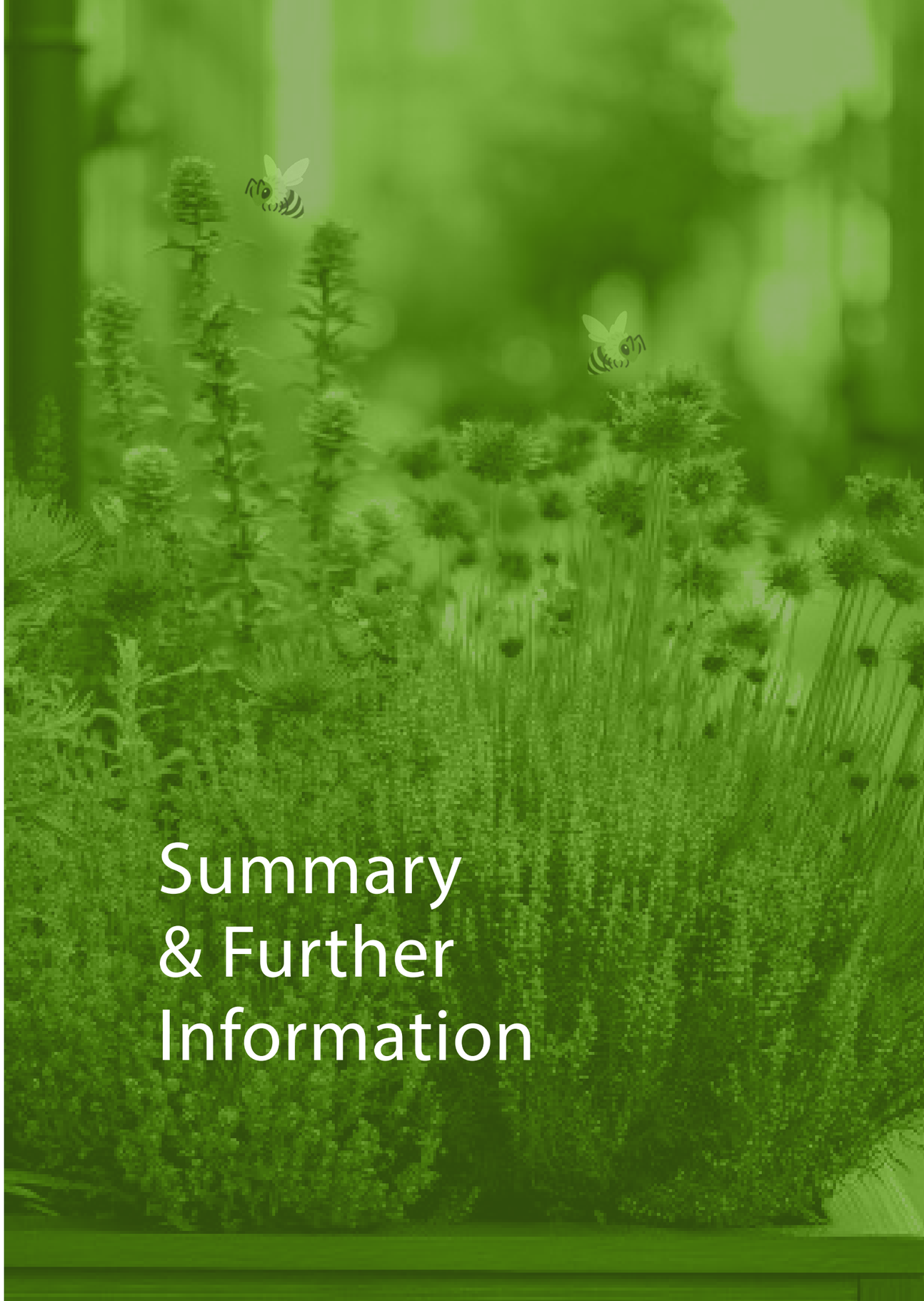


Maintenance Checklist

5.2 The checklist outlines repeat tasks and recommends a minimum of 2 maintenance visits per year. A printable version is available in the Appendix.

Table 3. Site maintenance checklist

Task	Frequency	Notes
Watering	As required based on weather	Water roots not foliage
Refill irrigation systems	As required based on presence, inspection and weather	If present, top up in dry periods
Apply feed to plants	Minimum 2x per year	Increase if plants are showing signs of failure
Perennial & tree pruning	1x in winter or early spring	Remove dead and broken branches/foliage
Check for pests	Minimum 2x per year	Commonly found under leaves
Check for disease	Minimum 2x per year	Signs of mildew or rot
Check soil health	Minimum 2x per year	Signs of compaction or low nutrient levels
Remove rubbish & debris	Minimum 2x per year or during other maintenance visits	Improve appearance
Check drainage holes	During other maintenance visits	Ensure adequate drainage
Apply mulch or compost	1x in winter or early spring	Minimum 5cm layer
Clean the planter	During other maintenance visits	Improve appearance
Optional		
Collect seeds & cuttings	During winter if required	Increase plant stock for new planters
Divide perennials	1x every 5 years or as required	Increase plant stock for new planters
Move/protect planters	During winter if required	Tender plants should be protected during winter



Summary & Further Information

Summary & Information

6. Top Tips

6.1 This document has provided tips to create successful and sustainable Planters for Pollinators. There are 4 top tips to follow when creating a new planter, these are:

- Right Planter: Select an appropriate planter considering the location and context, material properties and options, mobility requirements, aesthetic qualities in the urban environment, maintenance requirements such as watering, budget for creating the planter and the types of plants you want to display.

- Right Plants: Select appropriate plants from the available lists based on their form and growth habits such as dwarf variants, light requirements, soil requirements, flowering cycles, propagation opportunities, maintenance requirements and overall beneficial properties for a wide variety of pollinators.

- Right Cultivation: Ensure there is appropriate drainage in the planters, plants are watered regularly, appropriate soil has been selected, plants are arranged based on growth habits and well planted at the correct time with appropriate supports. Flintshire compost can be sourced for free from Flintshire County Council's compost and waste facility in Greenfield (subject to availability). Contact 01352 719216 for further details.

- Right Care: Perennials have reduced maintenance requirements compared to annuals, though appropriate care of the plants is required. This is based on their various requirements whether drought tolerant or shade loving, involves maintaining soil conditions and nutrient supplies, keeping the planters clean inside and out to improve aesthetic and promote plant health and propagating the existing plants through cutting, division and seeds to create new plants for free.

Funding

6.2 Planters for Pollinators could be funded in a number of different ways through direct government funding, grants, charitable donations, business sponsorship or individual community groups and members creating their own planters. Funding opportunities should be researched and discussed with local councils to understand what is available.

Figure 17. Pollinator friendly planters in Flintshire



6.3 As noted in Section 1, landuse intensification, loss and fragmentation of habitat areas, use of chemicals and herbicides and climate change are all having significant affects on pollinator numbers. Creating Planters for Pollinators in urban environments will introduce the much needed food network that pollinators rely on, whilst also enhancing the urban environment, addressing climate change and increasing wider biodiversity goals.



Appendix

Site Appraisal Checklist

Conditions	Notes
Location	For example; coastal or waterside, residential areas, outside of a shop, along a high street, next to a road?
Available Space	For example; dimensions of the available space? Is the available space horizontal or vertical?
Light	For example; full sun, partial shade, or full shade? Duration of sunlight throughout the day?
Climate & Weather	For example; average temperatures or risk of frost? High wind exposure? High levels of rainfall?
Accessibility	For example; accessibility for maintenance? Can vehicles approach if required?
Additional Requirements	For example; requirement for integrated seating, integrated irrigation system, temporary planter

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Planter Selection Matrix

		Small	Medium	Large	In-ground
Type of planting	Bulb	■	■	■	■
	Perennial	■	■	■	■
	Shrub	■	■	■	■
	Tree	✕	✕	■	■
Materials	Wood	■	■	✕	✕
	Metal	■	■	■	■
	Plastic / Fiberglass	■	■	■	✕
	Brick / Stone	■	■	✕	■
Mobility	Static	■	■	■	■
	Moved by hand	■	✕	✕	✕
	Moved by machine	■	■	■	✕
Aesthetic	Simple form	■	■	■	■
	Custom form	■	■	■	■
	Integrated seating	✕	■	■	■
Drainage / watering	Water system	✕	■	■	■
	Hand watering	■	■	✕	✕
Budget	High	■	■	■	■
	Low	■	■	✕	✕

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Planters for Pollinators

Maintenance Checklist

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Clean the planter	During other maintenance visits	Improve appearance
Optional		
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Divide perennials	1x every 5 years or as required	Increase plant stock for new planters
Move/protect planters	During winter if required	Tender plants should be protected during winter

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Planters for Pollinators

Tell Flintshire about the planters you have created by scanning the QR code and completing the survey.

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