



Requirements for the selection of plants for new schemes, replacements and designs. Guidance for selection.

1. Introduction

The University of Sheffield, as an environmentally responsible organisation, has made a clear commitment to reducing and managing its' environmental impact. The University owns and manages a significant area of green space and has developed a Biodiversity Action Plan (BAP) that sets out its commitment, and identifies opportunities to protect and enhance the biodiversity value of the University's estate.

Much of the green space found across the University's estate can be described as amenity space; they have been established to improve the visual amenity of university buildings or to provide areas for relaxation. Usually these spaces consist of grassed areas, shrub beds and tree pockets. These areas do support some wildlife; however there are opportunities to improve the ecological value of these areas through thoughtful and original design and planting schemes.

2. Purpose of this guidance

Habitat losses, though increasing urbanisation, makes it critical that the space left for flora is used efficiently to fulfil the role of what has been removed. A balance needs to be maintained – planting designs should appease the expected aesthetic of communities while at the same time provide the resources needed for the fauna and flora displaced by human activities.

This document provides a framework for both internally and externally designed planting schemes. It sets out the University's policies and requirements for the creation and design of amenity space. This guidance is supplementary to the University's BAP and has been developed to ensure that an equal emphasis is placed on the ecological value and the visual aesthetics of all future planting and replacement schemes.

3. Creating distinctive external estate

Our aspiration is to create a strong identity for the University's public realm, whilst supporting the greatest variety and quality of habitat types that are both viable and appropriate within an urban location.

We aim to create a distinctive and unique planting scheme that helps visitors, staff and students alike to identify our estate. The repeated use of a small number of plants that complement each other and create a core pallet of white, pink and purple across the public realm will ensure that we are able to create this distinctiveness, whilst at the same time offer flexibility to plant according to the location and conditions of the site and support biodiversity.

4. University Policy

The University is committed to providing opportunities for wildlife and conserving biodiversity; and will take full advantage of planting opportunities in order to provide both potential habitat and feeding sites for wildlife throughout the year.

The University favours planting schemes that consists largely of native trees, shrubs and flowers that have been grown from seed sourced locally. The use of tree and plant species that have little value to biodiversity will be minimised and only used in exceptional circumstances, such as planning requirements.

To create the distinctiveness across the public realm, every planting scheme must include a minimum of five plants from the following list of 17 plants.

4.1 Mandatory plants

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Verbena	bonariensis	Purple Top
Miscanthus sin.	gracillimus	Chinese silver grass
Calamagrostis	Xa. Karl Foerster	Feather Reed
Iris	hollandica	Dutch iris
Euphorbia	characias wulfenii	Mediterranean spurge
Nepeta	faassenii - Six Hills Giant	Catmint
Geum	coccineum	Avens
Sisyrinchium	striatum	Satin flower
Veronica	gentianoides	Speedwell
Geranium	sylvaticum	Wood crane's-bill
Helleborus	hybridus	Lental Rose
Anemone	nemorosa	Wood anemone
Dryopteris	dilatata	Broad buckler-fern
Allium	christophii	Persian onion
Thymus	vulgaris	Common Thyme
Achillea	Millefolium	Yarrow
Amelanchier	lamarckii	Snowy mespilus

In addition, a minimum of 50% of the plants specified in any planting scheme will be beneficial to wildlife. The University has developed an indicative planting list, which consists of both native and non-native plants. Nine of the 17 plants listed are also included in this list (these are highlighted in purple). This can be found in Appendix A.

5. Details

New planting schemes provide the ideal opportunity to improve the value of green space; the key requirements for any planting scheme designed for the University are listed below.

Maximise the use of single flowered varieties of plants - Many modern horticultural varieties have been bred to have double flowers. These varieties make it difficult for nectar feeding pollinators to do their work and provide their services. All varieties chosen for University planting schemes must be single flowered type

Provide nectar sources at different times and temperatures throughout the year - Different plants provide nectar at different times of year and within different temperature scales. Any new planting scheme must include a range of plants that bloom sequentially during the season; providing a nectar source for invertebrates throughout the year and in varying climatic conditions.

Provide urban ground cover - Often planting schemes are designed purely on an aesthetic basis; however ground cover is useful as it can provide additional food resources by extending the flowering season. All planting schemes developed for shrub beds should include some ground cover, for example heather or flowering bulbs, whilst taking care to avoid creating cover for rats and litter traps.

Provide several habitat types - If space allows then several habitat types should be included in the design. Key habitats include trees, hedges, shrubs and flower beds, grassed areas and water resources. Native bulbs and wildflowers should be naturalised in appropriate grassed areas. A mix of tree / hedge / shrub species must be included in the habitat design in order to provide a range of plant heights and colours, and a mix of nectar, fruits and seeds.

Plant in blocks and include a variety of flower shapes - This ensures that a range of invertebrates are accommodated for.

Favour native plants over non-native - Native plants must be of UK provenance, rather than northern European, for example. Native plants have adapted to local conditions, and provide the animals that depend on them with the exact food and shelter that they need at exactly the right time.

Provide artificial habitats if possible - For example bee, bird and bat boxes.

Use alternative to peat based products - The use of peat based soil amelioration products is prohibited by the University.

Minimise the use of pesticides - The use of pesticides/herbicides, except the use of specialist herbicides on hard standing areas and for the control of knotweed, is also prohibited by the University.

Avoid permanent irrigation systems - Drought tolerant species should be chosen to reduce the need for watering; permanent irrigation systems are only to be used in hanging baskets and flowering planters.

Plant to accommodate for climate change and environmental pressures – Environments and ecology are changing due to varying environmental pressures such as climate change and disease. Planting should reflect this and not leave habitats and features in a vulnerable position in future years.

Appendix A – Indicative Planting List

Entries highlighted in purple are plants that are also included in the list of 17 mandatory plants

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Acer	Spp.	Maple
Acer	pseudoplatanus	Sycamore
Achillea	millefolium	Yarrow
Aconitum	napellus	Monkshood
Aconitum	Spp.	Monkshood
Aesculus	Spp.	Horse Chestnut
Agastache	foeniculum	Anise Hyssop
Ageratum	houstonianum	Floss Flower
Alcea	rosea	Hollyhock – single flowered
Allium	schoenoprasum	Chives
Allium	Spp.	
Alyssum	Spp.	(Mustard family)
Amelanchier	canadensis	Juneberry, Serviceberry
Amelanchier	laevis	Juneberry
Amelanchier	lamarckii	Snowy Mespile
Anchusa	azurea	Italian Bugloss
Anemone	x hybrid	Japanese Anemone
Anemone	nemerosa	Wood Anemone
Antirrhinum	majus	Snapdragon
Aquilegia	alpina	Columbine
Arabis	caucasica	Rock Cress
Arbutus	unedo	Strawberry Tree
Arctium	lappa	Burdock
Armeria	maritima	Thrift
Aster	novi-belgii	Michelmas Daisy
Aster	x frikartii	
Aubretia	deltoidea	Aubretia
Aurina	saxatilis	Yellow Alyssum
Berberis	aggregata	Barberry
Berberis	darwinii	Barberry
Berberis	gagnepaninii	Barberry
Berberis	thunbergii	Barberry
Berberis	vulgaris	Barberry
Berberis	wilsoniae	Barberry
Berberis	x stenophylla	Barberry
Borago	officinalis	Borage
Bryonia	dioica	White Bryony
Buddleja	alternifolia	Butterfly Bush
Buddleja	davidii	Butterfly Bush
Buddleja	globosa	Orange Ball Budleia
Buddleja	x weyerana	Butterfly Bush

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Calendula	officinalis	Pot Marigold
Calluna	vulgaris	Heather, Ling
Caltha	palustris	Marsh marigold.
Campanula	latifolia	Bellflower
Campanula	Spp.	
Catalpa	Bignonoidea	Indian Bean Tree
Caryopteris	x clandonensis	Shrubby Verbena
Ceanothus	various	Californian Lilac
Centaurea	cyanus	Cornflower
Centaurea	montana	Perennial Cornflower
Centaurea	Spp.	Knapweed
Centranthus	ruber	Red Valerian
Ceratostigma	willmottianum	
Chamerion	Angustifolium	Rosebay Willow Herb
Chinodoxa	spp	Glory of the snow
Cirsium	Spp.	Thistles
Cirsus	siliquastrum	Judas tree
Clarkia	elegans	Godetia
Clematis	tangutica	Old-man's beard, Traveller's joy
Clematis	vitalba	Old-man's beard, Traveller's joy
Colchicum	autumnale	Autumn Crocus
Consolida	ambigua	Larkspur
Convolvulus	Spp.	Morning Glory NOTE: not Calystegia
Coreopsis	verticillata	Tickseed
Cornus	sanguinea	Dogwood
Corylus	avellana	Hazel
Cosmos	spp	Cosmos
Cotoneaster	Spp.	Cotoneaster
Crataegus	laevigata	Midland Hawthorn,
Crocus	Spp.	Crocus
Cynara	cardunculus	Globe Artichoke
Cytisus	scoparius	Common Broom
Dahlia		Dahlia - Single flowered varieties
Daphne	mezereum	Daphne
Daphne	odora	Daphne
Dianthus	barbatus	Sweet William
Dierama	pulcherrimum	Angel's Fishing Rod
Digitalis	ambigua	Yellow Foxglove
Digitalis	purpurea	Foxglove
Dipsacus	fullonum	Teasel
Doronicum	Spp.	Leopards Bane
Echinacea	purpurea	Purple Coneflower
Echinops	ritro	Globe Flower
Echium	vulgare	Vipers bugloss
Ekianthus	campanulatus	

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Eranthis	hyemalis	Winter Aconite
Erica	spp	Heather
Erigeron	Spp.	Fleabane
Eryngium	alpinum	Sea Holly
Eryngium	amethystinum	Sea Holly
Eryngium	bourgattii	Sea Holly
Erysimum	x allionii	Wallflower
Escallonia	langleyensis	Escallonia
Escallonia	rubra	Escallonia
Eschscholzia	californica	Californian Poppy
Euonymus	europaeus	Spindle
Eupatium	cannabinum	Hemp agrimony
Eupatorium	purpureum	Joe Pye Weed
Fagopyrum	esculentum	Buckwheat
Filipendula	ulmaria	Meadow Sweet
Foeniculum	vulgare	Fennel
Fritillaria	meleagris	Snakeshead Fritillary
Fritillaria	Spp.	
Fuchsia	Magellanica	Fuchsia
Galanthus	Spp.	Snowdrop
Galega	officinalis	Goats Rue
Geranium	sylvaticum	
Geranium	Phaeum	
Geranium	psilostemon	
Geranium	sanguineum	Bloody Cranesbill
Geum	Spp.	
Gomphrena	globosa	Globe Amaranth
Gypsophila	paniculata	
Hebe	albicans	Hebe
Hebe	salcifolia	Hebe
Hedera	helix	Common Ivy
Hedysarum	coronarium	French Honeysuckle
Helenium	Autumnale	Sneezeweed
Helenium	Spp.	
Helianthemum	Spp.	Rock Rose
Helianthus	annus	Sunflower
Helichyrsum	spp	Helichrysum
Heliotropium	arborescens	Heliotrope
Helleborus	spp	Hellebores
Hesperis	matronalis	Dame's Violet, Sweet Rocket
Hippocrepis	comosa	Horseshoe Vetch
Hypericum	Spp	Hypericum
Hyssopus	officinalis	Hyssop
Iberis	umbellata	Candytuft

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Ilex	aquifolium	Common Holly
Jasminum	officinale	Common Jasmine, Jessamine
Knautia	arvensis	Field Scabious
Lamium	purpureum	Red deadnettle
Laurus	nobilis	Sweet bay
Lathyrus	sylvestris	Everlasting Pea
Lavandula	All species	Lavender
Layia	elegans	Tidy Tips
Leucanthemum	x superbum	Shasta Daisy
Liatris	spicata	Dense blazing star
Ligustrum	ovalifolium	Privet
Ligustrum	vulgare	Privet
Limnanthes	douglasii	Poached-egg Flower
Linaria	vulgaris	Toadflax
Lithospermum	purpureo-caeruleum	Blue Gromwell
Lobelia	erinus	Lobelia
Lobularia	maritima	Sweet Alyssum
Lonicera	periclymenum	Late Dutch Honeysuckle
Lotus	corniculatus	Birds Foot Trefoil
Lunaria	annua	Honesty
Lythrum	salicaria	Purple Loosetrife
Malus	sargentii	Crab Apple
Malus	sylvestris	Crab Apple
Malus	x zumi	Crab Apple
Malva	Spp.	Mallow
Marrubium	vulgare	White Horehound
Mattholia	longipetala	Night-Scented Stock
Mentha	spp	Mint
Meconopsis	cambrica	Welsh Poppy
Melilotus	albus	White melilot
Melilotus	officinalis	Yellow melilot
Monarda	didyma	Bee Balm
Monarda	punctata	Lesser Spotted bee balm
Muscari	comosum	Grape Hyacinth
Myrrhis	odorata	Sweet Cicely
Myosotis	Spp.	Forget-Me-Not
Nemophila	menziesii	Baby Blue-Eyes
Nepeta	Cataria	Catmint
Nepeta	x faassenii	Catmint
Nicotiniana	alata	Tobacco
Nigella	damascena	Love in a mist
Oenothera	spp	Evening Primrose
Olearia	macrodongta	Daisy Bush
Origanum	vulgare	Marjoram
Papaver	orientalis	Oriental Poppy

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Papaver	Spp.	Poppy
Parthenocissus	quinquefolia	Virginia Creeper
Perovskia	atriplicifolia	Russian Sage
Persicaria	Spp.	Firegrass/knotgrass
Phlox	paniculata	Phlox
Polemonium	caeruleum	Jacob's ladder
Polygonum	Spp.	Knotgrasses
Potentilla	fruticosa	Shrubby cinquefoil
Primula	denticulata	Drumstick Primula
Primula	elatior	Oxlip
Primula	veris	Cowslip
Primula	vulgaris	Primrose
Prunus	avium	Wild Cherry
Prunus	Dulcis	Almond
Prunus	domestica	Plum
Prunus	laurocerasus	Cherry laurel
Prunus	Spinosa	Blackthorn
Pulmonaria	officinalis	Lungwort
Pyracantha	spp	Firethorn
Pyrus	Spp.	Pear
Quercus	Spp.	Oak
Ranunculus	ficaria	Lesser celandine
Reseda	odorata	Mignonette
Ribes	sanguineum	Flowering currant
Ribes	Spp.	Currant (various)
Ribes	uva-crispa	Gooseberry
Robinia	pseudoacacia	False acacia
Rosa	canina	Dog Rose
Rosa	glauca (aka rubrifolia)	Red leaf Rose
Rosa	pimpinellifolia	Burnet Rose
Rosa	Spp.	(Only single flowered types)
Rosmarinus	officinalis	Rosemary
Rubus	fruticosus	Blackberry
Rubus	idaeus	Raspberry
Rubus	X loganbaccus	Loganberry
Rudbeckia	Spp.	Coneflower
Scabiosa	Spp.	Scabious
Salix	caprea	Goat Willow
Salix	spp	Willows
Salvia	officinalis	Sage
Salvia	pratensis	Meadow Clary
Salvia	x superba	Salvia
Sambucus	nigra	Common Elder
Sambucus	racemosa	Red-berried Elder
Santolina	chamaecyparassias	Cotton Lavender

Latin Name (genus)	Latin Name (species)	Common Name (where applicable)
Scabiosa	atropurpurea	Sweet Scabious
Scabiosa	caucasica	Scabious
Sedum	spectabile	Ice Plant
Scillia	siberica	Siberian squill
Sidalcea	malviflora	Dwarf checkerbloom
Sinapsis	arvensis	Charlock
Solidago	canadensis	Golden Rod
Sorbus	aucuparia	Rowan, Mountain Ash
Stachys	byzantina	Lambs ear
Stellaria	Media	Chickweed
Succisa	pratensis	Devil's bit scabious
Spirea	Arguta	Bridal Wreath, Foam of May
Symphoricarpos	Spp.	Snowberry
Syringa	prestonii	Lilac
Tagetes	erecta	African Marigold
Tagetes	patula	French Marigold
Thymus	Spp	Thyme
Tillia	Cordata	Lime
Trifolium	Spp.	Clovers
Tussilago	farfara	Coltsfoot
Valeriana	officinalis	Valerian
Verbena	bonariensis	
Veronica	gentianoides	Long leaf speedwell
Viburnum	lantana	Wayfaring Tree
Viburnum	opulus	Guelder Rose
Viburnum	tinus	Laurustinus
Viburnum	x bodnantense	Viburnum
Weigela	Spp.	
Zinnia	elegans	Zinnia