

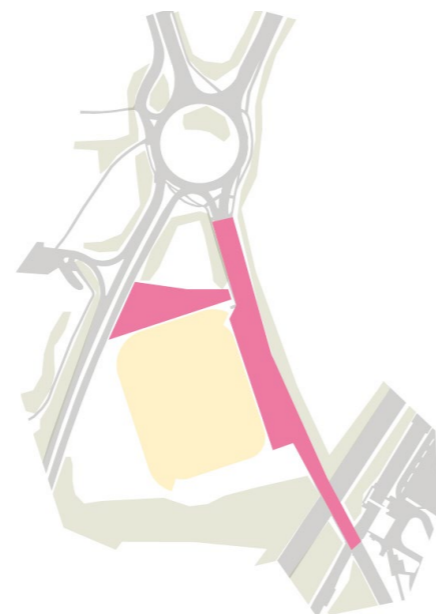


The Plaza

The planting in The Plaza provides a varying interest throughout the year by incorporating species that flower during the football season as well as during the summer "off-season" months.

In the spring planting displays striking yellow tones, while, blue, purples and pinks feature later in the year. Plants that provide a food source for pollinators and local wildlife will feature heavily within the planting palettes, with botanical species being favoured over cultivars or double flowered specimens.

The species selected here are design to provide a guide of how to achieve the desired concept, the list is not definitive and can be added to and subtracted from during design development.



THE PLAZA LOCATION PLAN



PERRENIAL BEDS

		WINTER	SPRING	SUMMER	AUTUMN
Lonicera fragrantissima	🌱	————			
Forsythia 'Minigold'	🌱		————		
Chaenomeles 'Lemon & Lime'	🌱		————		
Narcissus pseudonarcissus	🌱	————			
Narcissus poeticus	🌱		————		
Euphorbia c. subsp. wulfenii	🌱		————		
Nepeta cataria	🌱			————	
Camassia quamash	🌱		————		
Cytisus x praecox	🌱			————	
Ceanothus var repens	🌱			————	
Rosa 'Mutabilis'	🌱				————
Molinia caerulea	🌱			————	————
Calamagrostis 'Karl Foester'	🌱				————
Geranium 'Johnson's Blue'	🌱			————	
Salvia 'Caradonna'	🌱			————	
Calliopsis 'Profusion'	🌱				————

RAISED PLANTERS

		WINTER	SPRING	SUMMER	AUTUMN
Galanthus nivalis	🌱	————			
Vinca atropurpurea	🌱		————		
Forsythia 'Minigold'	🌱		————		
Bergenia cordifolia	🌱		————		
Narcissus pseudonarcissus	🌱	————			
Narcissus poeticus	🌱		————		
Tulipa 'White Dream'	🌱		————		
Tulipa 'Pink Pride'	🌱		————		
Ajuga 'Catlin's Giant'	🌱		————		
Myosotis sylvatica	🌱		————		
Ceanothus var. repens	🌱			————	
Salvia officinalis	🌱				————
Salvia 'Hot Lips'	🌱			————	
Hemerocallis lilioasphodelus	🌱			————	
Kniphophia 'Nobilis'	🌱				————
Liriope muscari	🌱				————





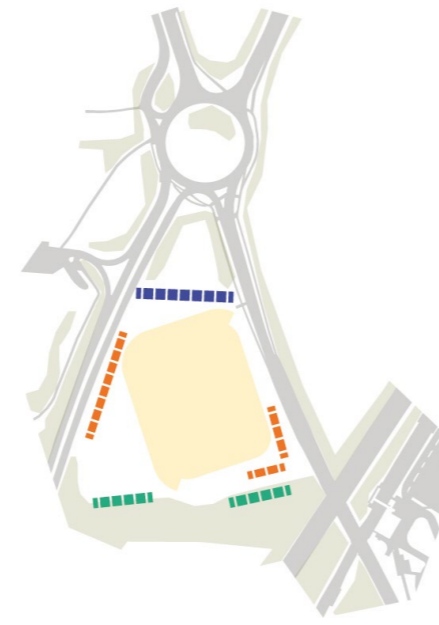
SuDS / Wetland / Rain-garden

The characteristics of the SuDS planting across the site are diverse in terms of typology and respond to seasonally wet and dry conditions.

The rain-garden swale running through The Plaza will provide significant ornamental value while the rain-gardens along the Approach and car-park have a greater emphasis on ecological value.

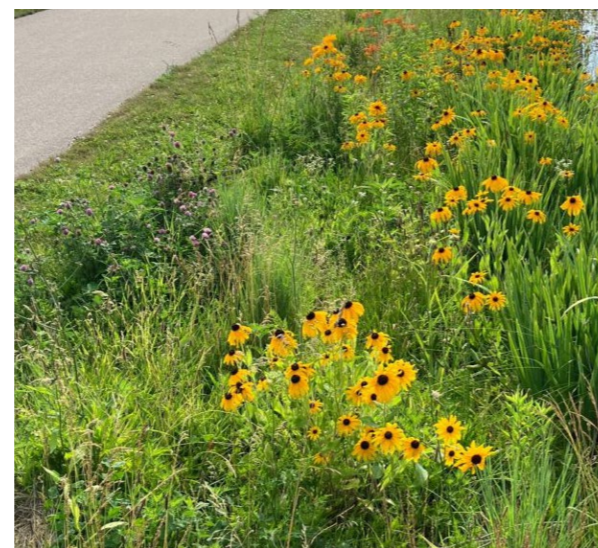
The attenuation basins have been designed to provide a variety of habitats suitable to a range of plant species.

The species selected here are design to provide a guide of how to achieve the desired concept, the list is not definitive and can be added to and subtracted from during design development.



SUDS/WETLAND LOCATION PLAN

- THE PLAZA
- RAIN GARDEN
- ATTENUATION BASIN



ENTRANCE SWALE	WINTER	SPRING	SUMMER	AUTUMN
Salix gracilistyla 'Mount Aso'	—	—	—	—
Caltha palustris	—	—	—	—
Primula veris	—	—	—	—
Primula pulverulenta	—	—	—	—
Iris pseudacorus	—	—	—	—
Butomus umbellatus	—	—	—	—
Mentha aquatica	—	—	—	—
Filipendula ulmaria 'Rosea'	—	—	—	—
Rudbeckia fulgida var. deamii	—	—	—	—
Aster 'Little Carlow'	—	—	—	—
Typha minima	—	—	—	—

SWALE AVENUE	WINTER	SPRING	SUMMER	AUTUMN
Primula veris	—	—	—	—
Camassia quamash	—	—	—	—
Iris sibirica	—	—	—	—
Mentha 'Chocolate'	—	—	—	—
Mentha aquatica	—	—	—	—

WILD RAIN GARDENS	WINTER	SPRING	SUMMER	AUTUMN
Salix caprea	—	—	—	—
Salix integra 'Hakuro-Nishiki'	—	—	—	—
Caltha palustris	—	—	—	—
Primula veris	—	—	—	—
Iris pseudacorus	—	—	—	—
Lythrum salicaria	—	—	—	—
Sanguisorba officinalis	—	—	—	—
Aster novae-angliae	—	—	—	—
Thypha minima	—	—	—	—



NATIVE WILD

SHRUBBY HABITAT



STUNNING BOULEVARD PICTURESQUE

AVENUE SEASONAL

VIBRANT

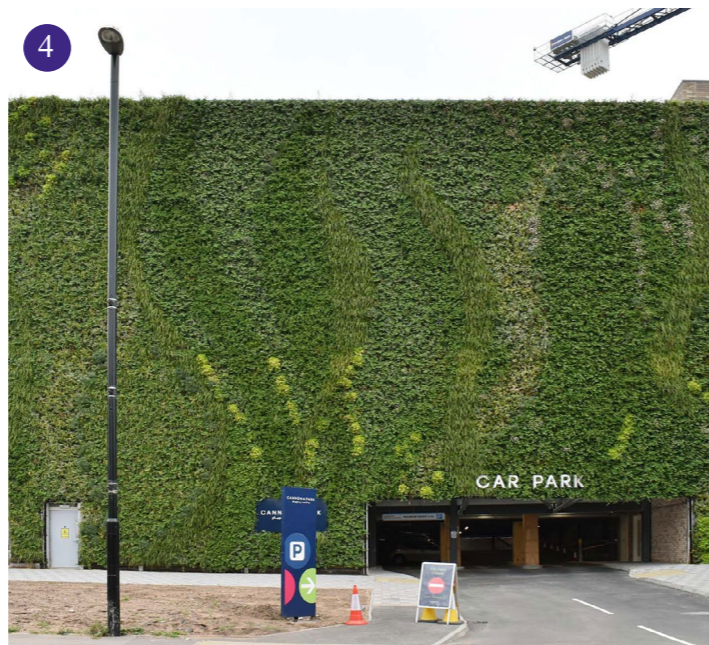


BIO-DIVERSE LOW

9.4 Biodiversity Net Gain Strategy

Working hand in hand with the Ecologists the landscape planting strategy incorporates the following planting strategies in order to achieve a minimum BNG score of 10%:

1. The creation of a natural pond and associated planting.
2. An extensive biodiverse roof with log piles and wild-flower planting.
3. Variety of planting typologies including; wild-flower mixes, translocated scrub and grasses, native hedgerows, scrub planting, rain-garden and amenity planting.
4. Bio-diverse wall.
5. Individual tree planting that can achieve medium size (as categorised in bng scoring matrix4.0) after 27yrs.





9.5 Management & Maintenance

Introduction

The maintenance of the scheme as it progresses both on Site and following completion will be critical to its success.

At this stage, it is key to establish the principles of maintenance and the review procedures that the chosen Landscape Contractor will be required to undertake.

Note: This maintenance section is to be superseded by the Landscape And Ecology Management & Maintenance Plan produced in the next phase. Coordinated between Landscape Architect and Ecologist.

General Operation

Working notice, reinstatement procedures, the use of any specialist firms/ methods for the control of mammalian pests in line with the environmental health policy of the Local Authority and the use of rain water for irrigation means, depths required, watering times and removal of arisings as part of any operation on site. The protection of areas affected by maintenance operations and the safety of Maintenance and Management operatives and members of the general public will need to be explained in a method statement. The Landscape Maintenance Contractor shall give 3 working days notice to the Client before the application of herbicide, the application of fertilizer, watering and each site maintenance visit. The Landscape Maintenance Contractor shall reinstate to its original condition any damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings. The Landscape Maintenance Contractor shall employ specialist firms/methods for the control of mammalian pests in line with the environmental health policy of the Local Authority.

The Landscape Maintenance Contractor shall ensure that the planting is wet to the full depth of topsoil, will not damage or loosen plants. With compacted soil loosen or scoop out, to direct water to root zone. Watering is to be carried out as necessary for the continued thriving of all planting, unless specified otherwise. The Landscape Maintenance Contractor will dispose of arisings as follows; biodegradable arisings to an approved tip, minimal grass cuttings to encourage habitats and winter interests, tree roots and stumps to an approved tip, shrub and tree pruning to an approved tip and litter and non-

biodegradable arisings to an approved tip. Extraneous rubbish not arising from the contract work will be collected and removed from site. The Landscape Maintenance Contractor is to protect areas affected by maintenance operations using boards/tarpaulins. Excavated or imported materials should not be placed directly onto the grass.

Existing Established Trees

Remove dead, diseased, decaying and damaged wood, unless advised otherwise within the Arboricultural Impact Assessment. Major pruning only to be undertaken after discussion with the Client. Note that permission from Local Authority Tree Officer will be required to carry out any tree surgery works to the trees that are subject to a tree preservation order.

Scrub, Treebelt / Trees

Scrub areas may be subject to low intensity management, with selective thinning and coppicing to maintain a varied vegetation structure and well developed understorey. Control of non-native species will be encouraged and in areas low public accessibility log and brush piles will be constructed for reptile refugia and hibernacula.

The monitoring of the trees across the Site, is to be carried out beyond the initial defects liability period, to successfully realise the tree strategy and to enable the longevity of the trees for the long term and for generations to come. The following specific measures are to be included in the detailed management plan:

- Watering - trees will be watered for the first two years after planting, after which they will generally become self-sufficient. The number of times watering is required will depend on location, weather conditions, climatic / micro-climatic conditions and variations to the growing season and is to be reviewed relative to their position within the site as part of the detailed management plan. In terms of successful establishment, giving the tree a lot of water once a week is of greater benefit that watering every day as this will encourage root development and prevent the tree becoming "lazy". Over watering is to be avoided as it will push oxygen away from the root system preventing root development.
- Analysis of soil conditions and compaction - this is to be carried out by a specialist contractor to monitor the oxygen levels and soil moisture both within the rootball and surrounding ground.

Amelioration recommendations are to be provided and a programme of works agreed accordingly.

- Tree canopy - leaf development, size, colour and the amount of foliage that is within the crown; along with length of new growth, bud development and size of buds is to be monitored. Pruning is to be carried out to promote healthy growth and to remove dead and diseased wood.
- All works to existing and proposed trees to be carried out in accordance with BS:3998 and the latest Forestry and Arboricultural Advisory Group /Health and Safety Executive safety guides.

Hedgerow

Hedgerows are proposed along the boundaries and green links to bolster the existing hedgerows. To encourage a bushy and fruiting hedgerow a less frequent pruning regime, all hedgerow will be cut twice every year when they are fully established, to allow fruits to be consumed by birds and other wildlife and avoid impacts on breeding and nesting birds.

Shrubs and Perennials

The planting, establishment, pruning and ongoing maintenance of shrubs and perennials will be clearly specified. The intention is to encourage the establishment of planting to provide continuous cover. Keep all beds weed free by hand weeding and/ or use of approved herbicides. Fork over shrub beds as necessary to keep soil loose with no low or high spots. Clear soil and/or mulch from adjacent hard surfaces. Until review period (year 5) apply a slow release fertiliser during March/April in accordance with manufacturers recommendations. Prune shrubs to remove diseased branches. However, dead flower heads or branches are encouraged to be left behind for autumn or winter interests. Apply sufficient water to maintain healthy growth. Maintain beds rubbish and litter free.

Meadow Grassland & Wildflowers

Area of meadow grassland and wildflowers are proposed within the Site. The maintenance regime are as follows:

- Meadow grass mixes will be composed of 20% wildflowers and 80% grasses;
- Where existing grassland is present, areas of bare ground will be opened up by light mechanical

disturbance for sowing in a method known as 'oversowing';

- Seed mixes are based on relevant NVC communities (Rodwell, 1991 and Rodwell, 1992) and are obtained from local or regional sources and native to the soil type;
- To be cut at the beginning of the season, i.e. February to early March, and again in late July. Seed heads are encouraged to be retained throughout the winter seasons for visual interest.
- Cutting must be postponed from spring through to mid-summer to permit flowering, then should be cut back and the sown annuals should be removed promptly once flowering declines (typically late July).

Meadow mixtures are composed mainly of perennial grass and wild flower species which take at least a full year to establish from sowing. Plants might not be well established in their first summer. Mow regularly throughout the first year of establishment; this will help maintain balance between faster growing grasses and slower developing wild flowers, following by minimum mowing and cutting once established. Quick growing meadow components will tolerate cutting and may even benefit from this 'pruning,' pushing them to develop more robust compact plants. Mowing to remove surplus top growth will give smaller slower growing plants more light and space to grow into.

Shrubs and Perennials

Sustainable urban drainage systems (SuDS) are proposed to the Site. The maintenance regime should be but not limited to the followings:

- Swales along the roads will be created to provide ecological enhancement by helping to clean and store surface water. Wet meadow grass and wildflower areas will be cut a maximum of three times a year to create a longer sward and scrub managed to prevent encroachment into wetland areas;
- Further maintenance of the basins will include monthly removal of litter and debris, removal of all dead growth and sediment and adjacent trees pruned and scrub managed to prevent encroachment into wetland areas.

9.6 Sustainability

Sustainable landscapes are responsive to the environment, re-generative, and can actively contribute to the development of healthy communities. Sustainable landscapes sequester carbon, clean the air and water, increase energy efficiency, restore habitats, and create value through significant economic, social, and environmental benefits.

Sustainable landscapes commonly describe landscapes that support environmental quality and conservation of natural resources. However, for many people, a sustainable landscape is hard to understand or visualize. Other terms such as xeriscape, native landscape, and environmentally friendly landscape have been used to describe sustainable landscapes. A well-designed sustainable landscape reflects a high level of self-sufficiency and quality. Once established, it should grow and mature virtually on its own with minimal maintenance, however, this does vary depending on the landscape character, but nevertheless one seeks to achieve an appearance that the landscape naturally occurred. A landscape that is self-sufficient can be difficult to attain in a more urban setting due to the environmental stresses and artificial conditions placed on plants and trees. In addition, educating and encouraging residents to take ownership, become custodians of their surrounding environment is important. Many may not be comfortable with the informality and greater use of native plants which may lack the desirable aesthetic features of typical, or more familiar landscape planting. Adjusting to an informal landscape may take time for many homeowners but implementing just one or a few principles of sustainable design can significantly benefit the landscape. These benefits may include enhanced landscape; less environmental decline; more effective use of water, the non-use of pesticides and other chemical resources; more valuable wildlife habitat; and cost savings from reduced maintenance, labour, and resource use.

Aesthetic and functional design principles typically are reflected in a well-designed landscape. Although sustainable landscapes may appear more “natural” and less manicured, they still rely on the standard design principles to create a visually appealing combination of plants and materials. Aesthetic principles including accent, contrast, harmony, repetition, and unity ensure the design is attractive, visually compatible and has a “sense of fit” with the surrounding landscape. Biodiversity refers to the natural variety of plants, animals, fungi, and micro-organisms found in all

ecosystems. Increasing biodiversity, whether it be in a garden or across the whole of the site brings many benefits to the landscape. Planting landscapes that more closely reflect native plant communities can enhance biodiversity. To achieve this, developing a similar layering of plants in a natural environment will followed.

Plants should be placed in conditions and environments where they would naturally grow. Additionally, biodiversity can be increased by:

- Using plants that provide habitat for wildlife and year-round aesthetic interest.
- Considering alternative methods of storm drainage management such as rain gardens and allowing run-off to percolate through porous surfaces, or implementing flood control measures along roads and footpaths that are sensitive to existing vegetation and habitat.
- Preserving existing natural areas in urban settings that provide habitat as well as aesthetic or recreational value.

Reducing resources and minimizing waste in a landscape can be accomplished in many ways:

- By selecting the correct plants and their locations, watering, pruning, and non-use of chemical applications. Accepting insects and diseases that are not life-threatening to landscape plants is another way to reduce chemical use and other resources.
- Applying mulch to the soil under plants reduces weed growth that in turn reduces chemical treatments and use of petrol-powered trimming equipment.
- In addition, the mulch improves soil quality over time, minimizing water waste caused by run-off and evaporation.

Soils are typically the most misunderstood and undervalued resource in landscapes. Soil quality and character significantly affect the growth and health of plants and should be a major consideration in landscape installation and design at the start. Since a substantial amount of root growth occurs in the top 300mm of soil, this soil can significantly enhance the establishment and growing conditions for new plants. Drainage and water retention are improved, oxygen storage is increased, and the living organisms in the soil are healthier. Effective sustainable design not only incorporates recycled materials (paving

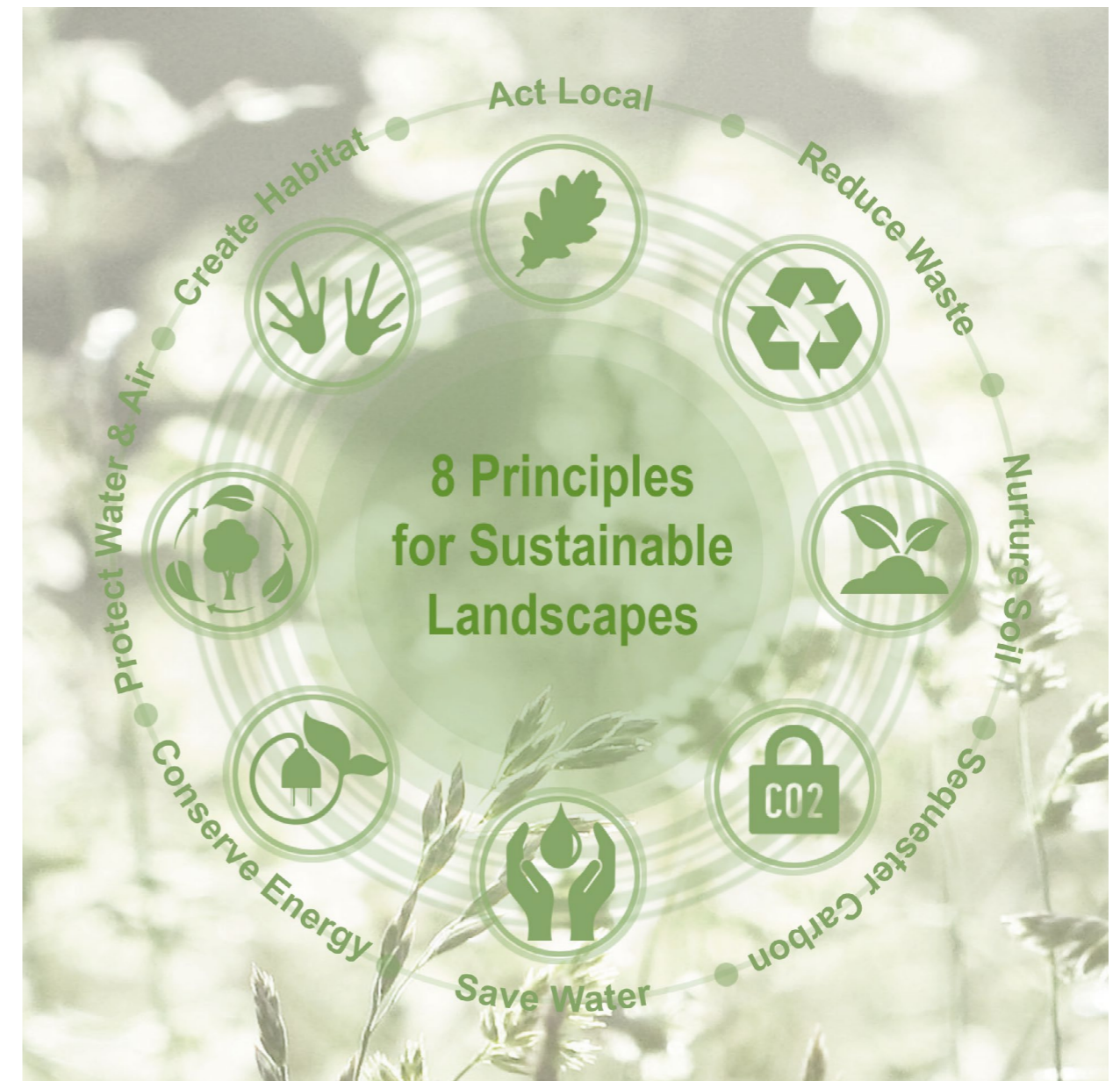
materials, mulches, building materials, etc.), but also addresses how communities can recycle for the good of their landscapes. Composting can be integrated into a residential garden.

By implementing the principles outlined, residential landscapes can be made more sustainable. Applying even the most basic principles such as proper plant selection and placement can benefit the aesthetics, environment, and budget of the typical home landscape. Properly selected plants are healthy plants that have fewer insect and disease problems

and, therefore, require less maintenance. Properly sized trees and shrubs need little pruning, and drought-tolerant perennials need minimal irrigation.

We will be seeking to apply these principles and approach to the landscape design throughout development to ensure it is a sustainable a possible.

NOTE: Sustainable principles to be coordinated with overarching project sustainable goals.



SUSTAINABLE LANDSCAPE PRINCIPLES