

OUTLINE SPECIFICATION (FOR PLANNING)

Site Clearance

Planting areas shall be free from old foundations, concrete bases and other similar obstructions. Before topsoiling the formation is to be loosened to a depth of 150mm by harrowing or ripping to assist in natural draining of the land. All coarse rubble, and artifacts greater than 75mm in diameter exposed by ripping operations shall be removed to a licensed facility.

Subsoil

Subsoil grading of the site shall leave landscape areas with smooth flowing contours to achieve the specified finished levels when topsoiled. Prior to topsoiling, subsoil formation should be ripped and loosened to a minimum depth of 450mm. Imported subsoil shall be in accordance with BS3882 for amenity use.

Topsoiling (Not Wildflower Grassland)

Topsoil to general planting and grass seeded areas to be to BS 3882:2015 - Multipurpose Grade. Topsoil must be free from pernicious weeds and roots, clay lumps, non-soil materials, brick or other building materials, foreign matter and chemical contamination. Topsoil should be spread evenly over areas to be seeded and planted. Minimum topsoil depths after settlement shall be: Grass-150mm, Shrubs - 450mm and Trees - 750mm. Topsoil shall be spread in layers not exceeding 150mm and firm each layer before spreading the next. At the time of laying, both material and weather should be reasonably dry. Soil levels should be 30mm higher than adjacent kerbs and paving after settlement and married in with existing soil levels.

Weed Treatment

All areas to be planted are to be treated with Roundup a minimum of 10 days prior to planting. Planted areas are to be kept weed free with the use of herbicides. Following the use of herbicides remove dead vegetation.

Planting General

All plant material to be supplied in accordance with HTA National Plant Specification. All planting to be local provenance wherever possible and from local supplier.

General Planting Notes

All plants to be healthy, hardened-off and with good fibrous root systems and to comply with the requirements of BS3936 Specification for Nursery Stock. All planting to be undertaken in accordance with BS4428 Code of Practice for General Landscape Operations. All plants to be protected from wind exposure at all times. All plants to be soaked in water for several hours prior to planting and to be well watered in. No planting to be carried out during poor weather conditions, i.e. when ground is frozen, waterlogged, or during droughts, hot sunshine or persistent dry or cold winds. All plant material to receive enough water to ensure healthy establishment.

Times of year for planting/ seeding:

Deciduous trees and shrubs: Late November to late March.
Container grown stock - Any time of year as providing adequately watered, autumn planting desirable.
Conifers and evergreens: September/ October or April/ May.
Herbaceous plants: September/ October or March/ April.
Container grown plants: At any time if ground and weather conditions are favourable.
- Watering and weed control: Provide as necessary.
Dried bulbs, corms and tubers: September/ October.
Turfing: All year round providing adequately watered, avoid hot sunny conditions.
Grass seeding: March - September (best in Spring or Autumn)
Wildflower seeding: Spring or autumn

Soil Conditioner/ Ameliorant

Soil analysis shall be completed by a reputable laboratory to determine any nutritional requirements, and any pH and organic matter adjustments necessary. Once determined, the soil shall be appropriately amended to a range suitable for the species to be established.

Compost: typical specification.

Horticultural Parameters Reported as (units of measure) Recommended Range
pH pH units (1:5 water extract) 7.0 – 8.7
Electrical Conductivity µS/cm or mS/m (1:5 water extract) 2000 µS/cm or 200 mS/m max
Moisture Content % m/m of fresh weight 35 – 55
Organic Matter Content % dry weight basis >25
Particle Sizing % m/m of air-dried sample passing 99% pass through 25mm screen
the selected mesh aperture size 90% pass through 10mm screen
C:N Ratio 20:1 maximum
Contaminant Parameters Various Meet BSI PAS 100* Criteria

Cultivation

Cultivate the soil of all areas prior to seeding and planting. This should include loosening, aerating and breaking up soil into particles 2-8mm to depth of 150mm. Remove any undesirable material brought to surface to a depth of 100mm including visible weeds, roots and large stones or clay balls with any dimension exceeding 30mm. Final Cultivation prior to seeding topsoil shall be brought to a fine tilth by approved mechanical means or by hand raking, and if necessary regrading of the surface will be carried out to conform to the prescribed finished levels.

Pre-planted Coir Rolls and Pallettes - Establishment of Marginals/ Emergents

Ground preparation: "Soil" can be subsoil, fine river gravels or silts that allow root access and are pollutant free.
Planting: It is very important for the installed rolls and pallets that the shoots are out of the water for the majority of the time as the shoots need good temperature, sunlight and oxygen in the air.
Intermittent flooding or lower water for 2 to 5 days should not compromise the establishment.
The roots must not dry out and be in contact with "soil" so that the plant can derive nutrients for the growth needed for establishment.

Tree Planting

Trees to be pit planted with root access to a minimum 7m³ area of topsoil. Minimum pit size to be 300mm greater than rootball in all directions. Excavate tree pits with slightly raised centre. Retain topsoil for reuse. Dig a hole which is substantially bigger than the volume of roots to be accommodated. Break up and loosen the base and sides of the

PLANT SCHEDULE

TREES

QTY	CODE	PLANT NAME	STOCK	FORM	GIRTH/HEIGHT	SPECIFICATION	PERCENT	QTY	PLANT NAME	STOCK	SIZE
11No.	ACE PSE xhs18	Acer pseudoplatanus	RB	EHS	18-20cm	3x; Extra Heavy Standard; clear stem minimum 200cm	47m	38No.	Carex acutiformis (Lesser Pond Sedge)	110-125cc	Plug; established root 6 months min; native British origin
6No.	ALN GLU xhs18	Alnus glutinosa	RB	EHS	18-20cm	3x; Large Feathered	20%	38No.	Iris pseudacorus (Yellow Flag Iris)	110-125cc	Plug; established root 6 months min; native British origin
7No.	FAG SYL xhs18	Quercus sylvatica "Purpurea"	RB	STD	18-20cm	3x; Extra Heavy Standard; clear stem minimum 200cm; 450-500cm ht	20%	38No.	Juncus effusus (Soft Rush)	110-125cc	Plug; established root 6 months min; native British origin
6No.	QUE ROB xhs18	Quercus robur	RB	EHS	18-20cm	3x; Extra Heavy Standard; clear stem minimum 200cm	20%	38No.	Lythrum salicaria (Purple Loosestrife)	110-125cc	Plug; established root 6 months min; native British origin
12No.	TIL COR xhs18	Tilia cordata	RB	EHS	18-20cm	3x; Extra heavy standard; clear stem minimum 200, 450-500cm ht	20%	38No.	Phalaris arundinacea (Reed Canary Grass)	110-125cc	Plug; established root 6 months min; native British origin

PLANT MIXES

PERCENT	QTY	PLANT NAME	STOCK	SIZE
25m ²	AQUATIC MARGINAL PLANTING - Coir Pallet - planted @ 20/m ²			
35No.	Alisma plantago-aquatica	110-125cc	Plug; established root 6 months min; native British origin	
7%	35No.	Apium nodiflorum	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Caltha palustris	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Carex acutiformis	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Glyceria maxima	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Iris pseudocorus	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Juncus effusus	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Lycopus europaeus	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Lythrum salicaria	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Mentha aquatica	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Myosotis scorpioides	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Phalaris arundinacea	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Ranunculus flammula	110-125cc	Plug; established root 6 months min; native British origin
7%	35No.	Schoenoplectus lacustris	110-125cc	Plug; established root 6 months min; native British origin
Note:	To be planted in pre-established coir pallets 2m x 0.5m, numbers of plants are approximate across the whole site area, and not the % mix per pallette. Standard plant mix pre-established coir pallets to be supplied by Salix River & Wetland Services Limited, or similar approved.			

pit. The trees will be planted to the same depth as they were in the nursery. Back fill the pit in stages, whilst firming up the soil around the roots until the original ground level is restored.

Tree pits to be filled with 1:3 mixture of compost and topsoil. Topsoil to contain peat free organic matter and Growtab fertiliser to be incorporated into each pit.

Tree Support

Extra heavy standard trees: short treble stakes and adjustable rubber ties. Stakes to be first grade pressure impregnated round timber with chamfered tops. Position stake close to tree and drive vertically at least 300mm into bottom of pit before planting. Backfilling: consolidate material around stake. Height of stakes: cut to approximately one third of the tree height above ground level. Tying: secure tree firmly but not rigidly to stake with ties within 25mm of top of stake.

Tree Accessories

Rootbarrier: Trees adjacent to hard surfacing and/or services to have growing area defined by Greenleaf Reroot 1000 high density root barrier, or similar approved, in accordance with manufacturer's and Engineer's guidance.
Irrigation: Trees in soft landscape (EHS and Standard trees) - All trees to receive a Greenblue Rootrain Metro irrigation pipe, or similar and approved.

Turfed Areas

Turf must meet the Turfgrass Grower's Association (TGA) Quality Standards for Cultivated Turf for the supply and laying of turf.

The turf soil should be of a sandy loam nature with no stones. The grass will be dense, of uniform green colour, free of broadleaved weeds and not visibly affected by pest or disease. Existing vegetation and stones should be removed and a light tilth prepared. Turf to be laid within 24 hours of receipt. Turfing shall comply with BS 3969 and be carried out when the weather and soil conditions are suitable. Turfing should not be carried out in exceptionally dry or frosty weather or when the ground is waterlogged. Allowance should be made to keep the turf watered during dry periods encountered throughout the establishment period.

Grass Seeding

After cultivation operations have been carried out, use a pre-seed herbicide on areas to be seeded. Existing vegetation and stones should be removed and a light tilth prepared. Sow areas to be seeded with grass seed which has been stored off the ground in a clean, dry place free from vermin. Following an even distribution of seed, the contractor shall carry out a light raking or light harrowing of the area and ensure consolidation of the seed with the soil by the use of a light roller.

All reasonable precautions shall be taken to ensure that pedestrian and other traffic does not cross areas during cultivation and until the grass has established.

The grass will be dense, of uniform green colour, free of broadleaved weeds and not visibly affected by pest or disease.

Allowance should be made to keep the grass watered during dry periods encountered throughout the establishment period.

300mm mowing strips to perimeter of all grassed and planted areas abutting building

Species Rich Meadow

Prepare ground in accordance with Emorsgate Seeds cultivation, sowing and after care guidance and the following instructions.

To prepare a seed bed first remove weeds using repeated cultivation or a herbicide. Cultivation close to established trees and shrubs can be damaging to their root systems so take care not to dig too deep, keeping disturbance to the minimum required to expose fresh soil.

A minimum 150mm depth of clean subsoil (or topsoil stripped to lower fertility) to be spread over all areas of proposed wildflower seeding.

Soil to be cultivated using a disk harrow or rotovator to 100mm depth then further cultivated to 30mm depth, graded and rolled to produce a firm, level seed bed.

Seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil/seed contact.

Meadow mix to be sown in August-September or March-April but can be sown at other times of the year if there is sufficient warmth and moisture.

For wet meadow mix, sowings on ground prone to winter flooding are safest either in the early autumn or in spring once the land has drained. Most plants need time to grow mature enough to withstand flooding.

A biodegradable erosion control blanket to be laid across banks underneath where seeding taking place, to provide immediate erosion protection and vegetation establishment assistance. To use Bionet C125BN supplied by Salix River & Wetland Services Limited, or similar approved. Erosion blanket degrades after the root and stem systems of the vegetation are mature enough to permanently stabilise the underlying soil.

Mulch and Compost Materials

General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Submit certification of source, analysis, suitability for purpose and absence of harmful substances.

Certified materials: Sanitized and stabilized compost and Spent mushroom compost. Mulch to be fine grade bark mulch.

Purity: Free of pests, disease, fungus and weeds. Preparation: Clear all weeds. Water soil thoroughly.

Mulch: Sustainable UK produced biomulch to base of trees.

Coverage: planted areas and ornamental trees to 75 mm depth.

Trees in grass: 500mm radius from trunk.

Finished level of mulch: 30 mm below adjacent grassed or paved area.

As part of good horticultural practice, use peat-free composts, mulches and soil conditioners.

5 YEAR MAINTENANCE SCHEDULE (for Planning purposes only)

Replacements (general)

Any plants that fails to establish within a period of 5 years from the completion are to be replaced in the next planting season with others of similar size and species unless written consent is provided by the Local Authority to vary the approved details. Any seeding that fails to establish within a period of 5 years from completion or occupation is to be re-seeded the following seeding season.

Restrictions

Thinning or tree removal should be undertaken outside nesting bird season which is March to August inclusive unless checked by a suitably experienced ecologist.

Component	Management Objectives	Code	Operation(s)	Time of Year	Frequency (per Year)	Year 1-5		
1. General maintenance requirements to all planted areas, unless otherwise stated in the detailed schedule below.	To maintain high standard planting scheme across site and ensure healthy establishment of plants.	A	Inspection	March-September	Annually.	x		
		B	Inspect tree stakes, ties and shelters and replace where necessary. Remove in Year 5.	February and after strong winds	Annually. In Year 5- Remove.	x		
		C	Watering - during establishment and to ensure continued thriving	As necessary during dry spells, or indicated in the detailed schedule below.	As required- daily in dry spells mainly April-September.	x		
		D	Reform new tree / shrub planting	February and after strong winds	Annually and as required following inspection.	x		
		E	Removal of debris and litter	Throughout	Each maintenance visit.	x		
		F	Plant replacements and reinstatement to Year 5 when instructed	November to March	Annually next following planting season.	x		
		G	Fertiliser	March	Annually.	x		
		H	Top up mulch to 60mm or 75mm depth (bark or gravel - refer to specification)	November	Annually.	x		
		2. New tree planting (incl. extra heavy standard trees, standard trees, multi-stemmed specimens and feathered trees)	To ensure that trees establish and remain in a healthy condition.	A	Establishment maintenance (weed control, fertiliser, tree guy wires, retraining, formative pruning)	As necessary following inspection	As required.	x
				B	Maintain 1m diameter weed free area, adjust soil and maintain depth of mulch	As necessary following inspection	As required.	x
3. Amenity Grassland	Good sward of even colour and smooth gradients. Height maximum 50mm			A	Reinstatement of eroded / damaged areas:	May-September	As required	x
				B	Cutting, remove arisings, trim edges and collect trimmings- remove	April-October Note: allow six weeks between end of flowering to cutting Note: Ox-Eye Daisy drifts from end of May do not cut until end of August.	15 visits. Maintain 50-70mm height. Approx. every 2 weeks in growing season	x
				C	Reforming edges to paths	Autumn	Annually	x
				D	Fertiliser- Spring	April	Annually	x
				E	Fertiliser- Autumn	October	Annually	x
				F	Light scarification / raking	March	Annually (if required)	x
				G	Weed control	March - October	As required	x
				A	Year 1: Cut the grass several times during the first summer to control annual weeds and to help grasses establish.	June, July and September	3	x (Y1)
		B	Year 2 onwards: Once established tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) to control by spot treatment with a herbicide. Cut sections only as needed to control invasive perennial weeds (docks, thistles) or contain scrub and bramble invasion.	As necessary following inspection	Annually if required	x		
		C	Year 2 onwards: Only cut after 1 August to protect any nesting invertebrates and beneficial insects Cut once every 2-3 years, on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.	Once September/October.	1 (2-3 yr rotation)	x		
5. Wildflower Meadow Mix e.g. Emorsgate EM2 – Standard General Purpose Meadow Mixture, or similar approved	Maintain to achieve the greatest species diversity. Prevent future encroachment by scrub/ saplings. Establish grassland that, once established, require little or no maintenance. Encourage good habitat for insects, small mammals, birds, amphibians and reptiles. Establish an attractive naturalistic meadow	A	Year 1: Most of the sown species are perennial and will be slow to germinate and grow and will not usually flower in the first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing. Avoid cutting in the spring and early summer if the mixture is autumn sown. These sown annuals should be allowed to flower, then in mid-summer cut and remove the vegetation. It is important to cut back the annuals before they die back, set seed and collapse: this cut will reveal the developing meadow mixture and give it the space it needs to develop.	July, August, September, October	4	x (Y1)		
		B	Weed Control (after establishment): Once established meadow grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) to control by spot treatment with a herbicide.	As necessary following inspection	Annually if required	x (Y2- Y5+)		
		C	Cutting (after establishment): After flowering in July/August take a 'hay cut'. Cut to 50mm after flowering. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Do not cut or graze from spring through to late July/August to give the sown species an opportunity to flow. Mow the re-growth through to late autumn/winter to c 50mm and again in spring if needed.	September, November, May	2 or 3	x (Y2- Y5+)		
		6. Aquatic planting e.g. Salix Coir Plant Pallettes and rolls, or similar	Develop a variety of vegetation structure, from dense tussock stands, to bare and recently colonised muddy areas. Maintain natural surveillance by clearing vegetation where growth compromises sight line. To ensure that central areas of the pond are kept clear and any excessive encroachment of vegetation is managed in the long term	A	Clear vegetation where sight lines from adjacent properties are obstructed.	As necessary following inspection.		x
				B	Periodic clearance in winter by mowing / cutting to ensure a minimum 1/3 water water is clear of vegetation.	December	Annually	x
				C	Cutting one third of area on a three year rotation.	December	Every 3 years	x
				A	Year 1 - Most of the sown meadow species are perennial and will be slow to germinate and grow and will not usually flower in the first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing.	March, May and September (weed growth control)	3	x (Y1)
				B	Year 1 Establishment cut - AUTUMN SOWN Avoid cutting in the spring and early summer if the mixture is autumn sown. These sown annuals should be allowed to flower, then in mid-summer cut and remove the vegetation.	August (cut and remove vegetation)	1	x (Y1)
				C	Cutting to 50mm (after establishment). After flowering in July or August take a 'hay cut' : cut back with a scythe, petrol trimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed. Do not cut or graze from spring through to late July/August to give the sown species an opportunity to flower.	July / August, September / October and February / March	3	x

SEEDING

TUSSOCK GRASSLAND MIX

Damaged areas from construction within existing grassland areas

to be reinstated and reseeded with Emorsgate ESG4 –

Tussock Grass, or similar approved. Sowing rate 2g/m²

WILDFLOWER SEED MIX

A general purpose naturalistic meadow mix. Emorsgate EM2 –

Standard General Purpose , or similar approved. Sowing rate 4g/m²

WET MEADOW GRASS SEED MIX

A grassland of traditional water meadows for seasonally wet soils. Emorsgate EM8 –

Meadow Grass Mixture for Wetlands , or similar approved. Sowing rate 5g/m²

NOTES AND ABBREVIATIONS:

FORM = Shape of tree as supplied by the nursery.

QTY = Quantity

RB = Rootballed (balled and wrapped).

SIZE = Height or Spread of juvenile plant.

Std = (clear stem) Standard.

STOCK = Root condition/protection method eg Bare root.

- Refer to specification for further information.

- All plants to be completely hardened off

- Substitutions to be agreed with Landscape Architect.

Plant Schedule generated by "Qscape" software 29/11/2016

DRAWING FOR PLANNING PURPOSES ONLY

A	25.11.16	HLe	CEB	Preliminary
Rev	Date	Initials	Checked	Revision
				Brook Holt Blackburn Road Sheffield S61 2DW Tel. (0114) 2669292 www.ecusltd.co.uk
Job Waterswallows Lane, Buxton				
Title Plant Schedule, Planting Specification & Maintenance Schedule - Sheet 6 of 10				
Drawn by HLe	Date 25.11.16	Scale NTS at A1	Drg. no. L9014/06	