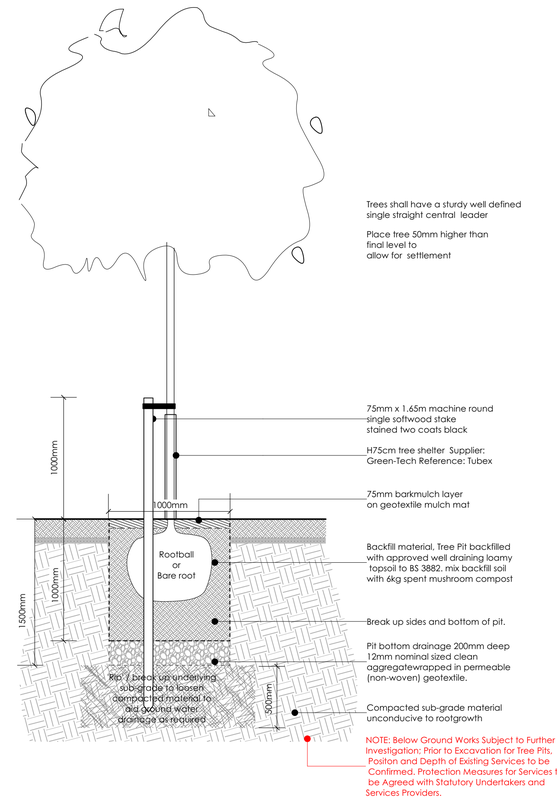
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY

- G1 Existing grassland to be enhanced
- G2 Wild flower meadow
- G3 Flowering Lawn
- G4 Reinforced grass
- G5 Swale
- H1 Proposed species-rich native hedgerow to reinforce boundary
- H2 Proposed clipped hedge to edge of car park
- R1 Intensive green roof
- R2 Brown roof
- S1 Proposed ornamental shrubs and herbaceousplanting
- S2 Proposed rain gardens
- S3 Proposed sensory planting
- S3 Proposed sensory planting
- T1 Proposed native urban tree planting
- T2 Proposed specimen tree planting
- W1 Proposed broad-leaved woodland
- W2 Existing woodland to be enhanced



TYPICAL TREE PIT DETAIL IN SOFT AREAS - OPEN SPACE

Landscape Plan

SOFTWORKS . Specification Notes
For all hard landscape works, drainage, signage and boundary treatments including slopes, walls, fencing refer to Architect''s or Engineer''s drawings. For existing levels refer to site survey and for proposed levels refer to Engineers drawings.

GENERAL
Workmanship
All landscape soft works are to be carried out in accordance with **BS 4428**: 1989 'Code of practice for general landscape operations (excluding hard surfaces)' and **BS 3936**: 1992 ''Recommendations for cultivations and planting in the Advanced Nursery Stock category''. Works should be carried out at the appropriate season and only in appropriate weather conditions.

Services and Setting Out
Prior to starting works, verify locations of all services and obtain instruction if required. Set out planting areas as shown and obtain approval before planting.

SOIL
Prior to any other landscape works **including topsoil spread**, ensure adequate drainage by ripping/sub-soiling as required. In all areas where shrub and tree planting is specified, supply and spread a minimum depth of 450mm of clean topsoil. In grass area, spread 150mm minimum. Topsoil and subsoil are to be imported and handled in reasonably dry conditions to avoid unnecessary compaction and damage to soil structure. Topsoil and subsoil should be stacked separately and strict precautions be taken to prevent mixing.
Contractors'' attention is drawn to **BS 3882** and **BS 4428** Section 4 to Section 8.

PLANTING Advanced Nursery Stock Trees
Excavate tree pits to accommodate entire root mass. Fork sides and base thoroughly to achieve drainage and remove clay patches. Mix backfill topsoil with minimum of 6kg spent mushroom compost and 10% sand by volume. Firm in layers and water to field capacity. Anchor each rootball with underground guying system. Fit irrigation (flexible perforated plastic pipe with all fittings and fixtures including cap with metal chain retainer.).

Mulch: Supply and spread a minimum depth of 75mm bark mulch to top of tree pits to extend in m2 square.Tree pits in heavy ground require land drainage pipes to be connected into surface water drainage system. Under conditions of heavy rain, ponding in soil may occur and may require alleviation by land drainage. Obtain advice in each case from the Engineer prior to topsoil spread.
Bark mulch:
Supplier: Melcourt Industries Ltd or equal approved
Reference: Amenity grade bark mulch
Refer to tree pit detail

PLANTING Nursery Stock (Shrubs, Whips and Transplants)
Preparation
Prior to planting cultivate soil to 300mm. Leave surface regular and even and remove all debris and stone over 50mm diameter. Carry out weed control as necessary.

Hedge planting: Excavate trench minimum dimension 450 x 450 and rip/fork over bottom of trench to ensure adequate drainage. Native hedgerow plants are to be planted in double staggered rows @ 6 plants per Lm and formal hedge plants to be planted in single row @ 4 plants per Lm.
Extent and location of native hedge planting to be confirmed on site.

Planting:
Plant each plant upright, carefully replacing backfill and heel well in. Add min 2kg planting compost to the backfill material for each shrub/tree during planting and mix well. Weed control is to be carried out by periodic herbicide spraying at intervals to be agreed with the Main Contractor. Water to field capacity. Supply and spread 75mm deep bark mulch to all planted areas to suppress weed growth (as per ANS trees).

SEEDING / TURFING
Prior to seeding cultivate topsoil thoroughly to 100mm minimum. Leave soil surface regular and even, removing all humps and hollows and remove all debris and stone over 50mm diameter. Ensure that soil surface marries into existing levels and hard edges, service covers etc, being slightly proud to allow for settlement. Apply suitable pre-seeding fertiliser and herbicide where appropriate. Firm and rake to prepare a seedbed. Supply and sow specified grass seed at scheduled rate, two equal sowings in transverse directions. Roll and water.
Wildflower meadow areas: strip topsoil and lightly cultivate subsoil prior to seeding.

Note for native hedgerow planting:
Excavate trench minimum dimension 450 x 450mm and rip / fork bottom of trench to ensure adequate drainage. Transplanted hedging plants to be planted in a double staggered row at 4no plants per linear meter and to be fitted with spiral guards individually. Water to filed capacity.

Management Once Established: ' Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut' : cut back with a scythe, petrol strimmer 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.

SOFTWORKS . Aftercare
AFTERCARE: General
The softworks contract shall include a 12 month maintenance period following practical completion. During this period the softworks contractor is responsible for all aspects of softworks aftercare. Allow for regular inspection visits, maintenance and routine site inspection as specified BS 4428, In addition, allow for routine litter clearance, from all planting areas. The softworks contractor is to supply to the client a programme of maintenance and report maintenance visits and actions undertaken in an agreed form.

AFTERCARE: Standard Trees (boundary trees):
Allow for maintenance works, to include firming of tree stakes and replacement or adjustment of tree ties, weed and pest control, protection from animals, formative pruning to achieve desired form, watering and replacement of failures.

AFTERCARE Nursery Stock Planting:
Allow for maintenance works, to include weed control, attention to protection from animals, formative pruning to achieve desired form, watering and replacement of failures. Take special care to control weeds within shrub shelters.

AFTERCARE Amenity Grass:
Allow for maintenance works, to include fertilising, watering, disease and weed control, aeration, removal of litter, rolling and cutting to maintain the works in a tidy condition and promote healthy growth.
Wildflower meadows: cut meadow twice a year. Undertake reular weeding (hand pulling only), allow for removal of litter.

Enhancement of Plantation Woodland W1
Proposals include enhacement to existing bramle scrub.Native trees to be planting incorportation an understory of 3 mixed native shurb species such as Hazel, Dogwood and Guelder Rose.

Enhancement of Plantation Woodland W2-A
Proposals include the enhancement of existing Plantation Woodland from "Poor" to "Moderate" condition. Achieved through the eradication of invasive species (snowberry and variegated yellow archangel) and replacement with native tree and shrub planting.

In addition, it is proposed to re-seed areas of damaged ground using a shade tolerant wildflower mix (Emoresgate EW1F). The woodland parcel is proposed to be extended northwards along the western boundary, with new native tree planting proposed over the existing bramble scrub habitat.

Enhancement of Plantation Woodland W2-B
Proposals include the enhancement of existing Plantation Woodland from "Poor" to "Moderate" condition. This will be achieved through planting the planting of native tree and shrub species to both increase the number of native tree or shrub species within the woodland and the age distribution of trees.

A standing deadwood habitat feature (stag beetle loggery) should be created within the woodland parcel using any deciduous trees felled to facilitate the development.

Enhancement of Amenity Grassland
A management regime aimed at establishing "Good" condition semi-improved neutral grassland in areas formerly managed as amenity grassland is to be implemented. The southern boundary grass verge is to be targeted due to its proximity to Ham Land. The verge will be subject to scarification, re-seeding and adoption of a hay meadow cutting regime in order to improve the floristic diversity of the sward and reduce the vigour of dominant grasses.

The existing grass verge along the southern boundary is species-poor. To achieve the target distinctiveness and condition, management should target an **increase in species richness to >9 species/m².**

Colonisation of the site by desirable plant species can take many years, even where management regimes are undertaken to promote colonisation. As such, it is recommended that a proactive approach is adopted to boost the floristic diversity of the grassland on site. The use of seed mixes of local provenance could be used on site to boost floristic diversity, with Emorsgate EM3 Special General Purpose Meadow Mixture recommended.

Seed mixtures should be spread between late-July and early September or between March- April.

Immediately prior to seeding in the first year the grassland should be scarified with a target of creating approximately 50% disturbed ground.

Long-term management should comprise a hay meadow management regime as follows:
- Leave areas of grassland unmown outside of the below proposed cutting windows in order to allow plants to flower and set seed;
- Complete a hay cut in late July-mid August once plants have set seed;
- Complete a second cut towards the end of October and in February, in order to maintain an approximate sward height of 5-10 cm outside of the growing season; and,
- Remove all arisings from site after each cut in order to limit nutrient build up and to prevent excess thatch from inhibiting seed germination.

Control of Undesirable Species
Efforts should be made to hinder the growth of undesirable species which could be detrimental to the condition of the grassland. The following species are considered undesirable for this habitat type: creeping thistle, spear thistle, docks *Rumex spp.,* brambles and common nettle *Urtica dioica.* The species should be removed manually by hand. Total eradication of the species is not a requirement, however, undesirable species should make up less than 5% of the vegetated ground cover.

Where plant removal is undertaken, bare areas should be left to naturally regenerate or further seed mix can be added at an appropriate time of year.

PROPOSED PLANTING PALETTE:

G1 - Special General Purpose Meadow Mixture
Supplier: Emorsgate
Ref: EM3
Note: EM3 is a complete mix composed of 20% native wild flowers and 80% slow growing grasses.

G2- Meadow Mixture for Loamy Soils
Supplier: Emorsgate
Ref: EM5
Note: EM8 is a complete mix composed of 20% native wild flowers and 80% slow growing grasses

G3 - Flowering Lawn Mixture
Supplier: Emorsgate
Ref: EL1
Note: Mixture EL1 contains slow growing grasses with a selection of wild flowers that respond well to regular short mowing

G4 - Reinforced grass
Supplier: Germinal
Ref: A24 (Wear & Tear)
Note: A high quality general purpose mixture for when extra durability is required.

G5 - Meadow Mixture For Wetlands
Supplier: Emorsgate
Ref: EM8
Rate: 4g/sq.M
Note: EM8 is a complete mix composed of 20% native wild flowers and 80% slow growing grasses

H1 - Native hedging plants

Carpinus betulus 'Hornbeam'	60-80/1+1 (50%)
Acer campestre 'Field maple'	60-80/1+1 (25%)
Corylus avellana	60-80/1+1 (15%)
Cornus sanguinea 'Dogwood'	60-80/1+1 (5%)
Euonymus europaeus 'Spindle'	60-80/1+1 (5%)

H2 - Clipped hedging
Carpinus betulus 'Hornbeam' 60-80/1+1 (100%)

R1 - Intensive green roof
Supplier: Wildflower Turf
Ref: WFT-Roof-34
Note: The roof turf is made up of 41 UK native wildflowers and grasses, with a minimum of 50% wildflowers.

R2 - Brown roof with a varied substrate depth between 80-150mm
Supplier: Emorsgate
Ref: ER1
Note: ER1 seed mix is designed for use on rooftops, comprising 20% native wild flowers and 80% slow growing grasses.

S1 - Planting areas for ornamental shrubs and herbaceous
Abelia x grandiflora Francis Mason'
Salix cinerea
Cotoneaster dammeri
Euonymus fortunei 'Emerald Gaiety'
Hypericum calycinum
Lavandula angustifolia Hidcote'
Potentilla fruiticosa varieties
Geranium varieties

S2 - Rain gardens
Ajuga reptans 'Catlin's Giant'
Astrantia major Ruby Wedding'
Geranium macrorrhizum
Nepeta 'Six Hills Giant'
Persicaria bistorta 'Superba'
Rudbeckia fulgida sullivantii 'Goldsturm'
Carex oshimensis 'Evergold'
Deschampsia cespitosa 'Goldtau'
Miscanthus sinensis 'Gracillimus'

S3 - Sensory planting
Stachys byzantina
Lavendula hidcote
Lunaria annua
Prunus serrula
Briza maxima
Pennisetum alopecuroides
Tropaeolum majus
Allium schoenoprasum

S4 - Pollinator planting
Agastache rugosa
Astrantia major
Digitalis purpurea
Echinacea purpurea
Echinops ritro 'Veitch's Blue'
Liatris spicata
Penstemon digitalis
Spympyotrichum novae-angliae
Veronicastrum virginicum

T1 - Native trees
Populus tremula
Betula pendula
Acer campestre
Tilia cordata

T2 - Specimen trees
Crataegus Paul's Scarlet'
Catalpa bignonioides
Amelanchier canadensis

W1 and W2 - Broadleaved woodland and woodland to be enhanced

Alnus glutinosa 'Alder'	10 - 12cmg (5%)
Populus tremula 'Aspen'	10 - 12cmg (5%)
Betula pendula 'Silver Birch'	10 - 12cmg (10%)
Acer campestre 'Field Maple'	10 - 12cmg (5%)
Quercus robur 'English Oak'	60-80cm/1+1 (15%)
Sorbus aucuparia 'Rowan'	60-80cm/1+1 (5%)
Pinus sylvestris 'Scots Pine'	40-60cm 3L (10%)
Prunus padus 'Bird Cherry'	60-80cm/1+1 (10%)

P05	Updated proposed SUDs feature layout.	12/10/2022	BMS	JBY
P04	Updated information following comments from Ecologist.	30/09/2022	BMS	JBY
P03	Updated Carpark Layout	28/09/2022	BMS	JBY
P02	Issued for Information	21/09/2022	BMS	JBY
P01	First Issue	01/08/2022	JBY	JBY
Revision		**Date**	**Drn**	**Chk**

Client
Surrey County Council

Project
Surrey Outdoor Learning & Development - TYM

Drawing Title
Landscape Planting Strategy

Suitability Status
S2 - Suitable for Information

Job No.	Scale	Size	Rev
211263	**1:1000**	**@ A1**	**P05**

Drawing Number
PR-200-PEV-XX-XX-DR-L-00201
Project Code - Originator - Zone - Level - Type - Role - Number

PICK EVERARD

T 0345 045 0050 www.pickeverard.co.uk