

SOFTWARES SPECIFICATION

STANDARDS OF WORKMANSHIP
All works are to be carried out in accordance with British Standards:

BS 4428: 1989 - Code of Practice for General Landscape Operations (excludes hard surfaces) or any amendments thereto;

BS 3936-1: 1992 Nursery Stock. Specification for trees & shrubs, or any amendments thereto;

BS3882:2015 Topsoil.

Prior to commencement of works, the contractor must be familiar with the exact location of any underground services and maintenance points.

All planting areas are to be maintained weed free for the duration of contract period, until handed over to the client and/or in accordance with any maintenance agreement post completion

PROVENANCE
Wherever possible, all plants supplied shall be of British provenance, indigenous to the area and fully hardened off.

All plants to be supplied shall comply with BS8545:2014, BS3936-4:2007 Nursery Stock; Specification for Forest Trees, Poplars & Willows & the HTA National Plant Specification.

Plant material shall only be imported if unavailable in the UK. Contractor to provide details of the origin of all plant material and details of the nursery which supplies the plants. All plant material to be tagged and clearly identified for use on the project.

PLANTS
Plant handling at the nursery and during transit up to delivery shall be in accordance with British Standards.

Plants are to be healthy and exemplar specimens of their species, free from all pests and disease, with good fibrous root systems, free from damage & shall be accompanied by appropriate plant health certification.

All planting is to be in accordance with BS 4428 1989.

All plants to conform to BS 3936. Bundles (bare root) or pots to be clearly labelled with species and size. Sizes stated in the schedule are minimum sizes. Any changes to the plant species or specifications must be approved prior to planting.

Storage of plant material on site should be minimised. Protect any bare root stock prior to planting by covering with sacking, to prevent drying out of the roots.

PLANTING SEASON
All planting to be carried out in the first planting season. Bare root stock is to be planted between October - March.

Do not plant when the ground is waterlogged or frozen or during periods of drought. All planting areas to be maintained weed free for duration of contract period.

The location of all clumps and individual trees will be agreed on site with the landowner prior to planting.

Species will be randomly arranged within the groups.

CONTAMINATION
Do not use topsoil which has been contaminated with subsol, rubbish, oil based products or other material toxic to plant life. Dispose of any contaminated waste in accordance with current waste disposal, CDM and Health and Safety Regulations.

PLANTING DEPTHS
Spread imported topsoil over prepared subsol in layers not exceeding 150mm and gently firm each later before spreading the next. Overall maximum depths after firming and settlement are to be:

- Shrub (scrub) Planting to 450mm depth;
- Standard Trees to 600mm depth.

All container grown plants are to be planted in a pit and backfilled with 80% clean topsoil and 20% approved green compost to PAS100. Ensure topsoil is friable, clean and free from weeds, stones and other debris.

MULCHING
After planting, apply a surface layer of organic mulch to a min depth of 50mm & a min 0.5/0.75m diameter, pulling the mulch away from the bases of tree trunk, creating a donut-hole. Do not pile the mulch up against the trunk as it will cause excessive moisture to build up.

WATERING
Watering is to be carried out as necessary to ensure the successful establishment of all trees, shrubs & grassed areas, once planting has been carried out, though the defects period as per the terms of the contract.

HERBICIDE GENERALLY
Any herbicide used on site shall be of a type approved by and applied in accordance with Pesticide Regulations 1986 and any relevant Codes of Practice issued by DEFRA. Herbicide shall be applied to topsoil to eradicate any weed germination which has occurred either prior to or following cultivation.

Apply all pesticide/herbicide strictly in accordance with manufacturer's recommendations, all relevant Local Authority requirements and current CDM regulations observing all precautions. Remove all containers and chemicals from site immediately once they are no longer required.

CHEMICALS GENERALLY
Use only products approved by and applied in accordance with Pesticide Regulations 1986 and any relevant Code of Practice issued by DEFRA and all current Health & Safety legislation, COHSS requirements and CDM regulations. Ensure site operatives are certified. Ensure no chemical products are used in or nearby waterways.

TOPSOIL
Existing site won topsoil to be used where quality and suitability has been agreed with the client in advance of planting. Handling and storage of topsoil to be in accordance with the landscape specification. Provide as necessary imported topsoil to make up any deficiency of existing topsoil on site and to complete the work. Import topsoil to BS 3882:2015 - General Purpose Grade.

TREE PITS
Planting pit dimensions to ensure that tree pits are at least 75mm deeper and 150mm wider than root system when fully spread.

STAKING & PROTECTION:
Tree shelters must be of a size, height and type suitable to the tree or shrub it is designed to protect. The use of plastic products is to be discouraged. The shelter must be adequately supported by a stake or cane and designed to last for at least two to three years without causing damage to the growing tree. It must be checked regularly while protecting the tree and be removed once the tree becomes established to avoid constriction damage.

Establish the position of a timber stake so as to not damage the tree roots, prior to planting, on side of prevailing wind. Remove the tree and drive the stake firmly into the soil.

Replace the tree, backfill the pit in 150mm layers. Shake the tree to ensure a thorough distribution of soil through the roots. Tread in the final layers.

Attach the tree to the tree stake using a proprietary rubber tie, with spacing device. Attach a Shelterguard tree shelter (or similar approved).

If trees planted are likely to be subjected to grazing by livestock or larger mammals such as deer, it is recommended that wooden tree guards are fitted.

A tree guard should be capable of protecting the trunk of a standard tree against bark stripping by livestock, deer and other wildlife. It must provide sufficient clearance so grazing animals cannot reach within 1m of the stem of the tree. Livestock netting will provide greater protection from rabbits etc.

A Bio-Earth, Biodegradable Plastic Free, Tree Shelter Guard, 600mm (or similar approved) is recommended for shrubs. Where there is a likelihood of deer browsing on the young tree stock, a 1.2m shelter is recommended.

Shelters remain in place for 5 years and shall be removed if they are constricting the trees. The requirement for additional stock protection shall be reviewed when the shelters are removed.

POST PLANTING MANAGEMENT
All planting shall be maintained for five years following planting. A 0.5m radius circle free of competing vegetation will be maintained around each tree using a suitable translocated herbicide (2 treatments per year), taking care to prevent any damage to the trees. Trees will be inspected annually to straighten or replace stakes and shelters, and all dead and dying trees will be replaced during the 5 year planting maintenance period.

Vegetation within the fenced planting areas shall be managed for the period that the fencing remains in place, or until it is suppressed by the tree canopy.

Management shall comprise maintenance of a sprayed vegetation-free circle, cutting of grass (3 cuts per year in May, July and September), and control of invasive and injurious weeds by spot spraying with a suitable translocated herbicide. Care will be taken to prevent any damage to trees during the grass cutting operations.

ESTABLISHING A HERB RICH SWARD
For the establishment of a herb-rich neutral sward, the soil should be of low fertility and prepared to a high standard in order to maximise germination rates and establishment of the sward.

The aim of soil preparation is to produce a functional soil profile that provides the herbs and grasses of the target vegetation type with an appropriate balance of drainage and moisture retention through the creation of void spaces of various sizes.

Prior to commencing soft landscape planting, it is important that a full assessment is made of the soil resource available:

- Assess the Soil Structure - carry out a soil assessment across the site to be planted, testing for Soil Organic Material (SOM);
- Assess Nutrient Management - pH testing and soil phosphorus tests, taking multiple cores across the area be planted, ideally between October and March. If fertility needs to be reduced to successfully establish a herb-rich ley, either a double hay cut or soil stripping may help;
- Assess the current condition of the area to be planted - what are the dominant grass species, such as Yorkshire fog, meadow foxtails and cocksfoot and broadleaved species, such as creeping buttercup and white clover;
- Assess the Weed Burden - weeds must be controlled before any enhancement to a herb-rich ley can take place. Weeds such as docks, thistles and nettles should be hand-pulled or spot sprayed (in accordance with the UK Pesticide Guide (2020) BCPC NIAB). NOTE: The control of the weed burden may take several years to achieve total success.

Herb rich grasslands thrive on low nutrient soils, therefore topsoil should only be used if it contains low levels of phosphorus, with an index of 0 or 1 or less than 16mg/l, otherwise regeneration directly onto subsol is preferable.

OVERSEEDING
Cut or graze the existing vegetation very short and create at least 50% bare ground in June to mid-July. Remove any cuttings. Over sow, as necessary, 'General Purpose Meadow Mix' (EM2) from Emorsgate Seeds (or similar) at 40kg/ha, into patches of bare ground, to supplement natural regeneration and allow to naturalise across the existing grassland over time.

Sow during the period September to October or, if absolutely necessary, April to May, while the ground is wet or damp. Seed would ideally be sown in two directions and should be lightly rolled in.

Sow according to manufacturer's recommendations and manage initially by carrying out a single late summer hay cut, to allow the flowers to set seed, using a strimmer and leave the hay on the ground to dry and allow the seeds to fall back into the soil.

Species to include: *Achillea millefolium*, *Agrimonia eupatoria*, *Centaurea nigra*, *Daucus carota*, *Rumex acetosa*, *Galium verum*, *Knautia arvensis*, *Leucanthemum vulgare*, *Malva moschata*, *Plantago lanceolata*, *Poterium sanguisorba ssp sanguisorba*, *Primula veris*, *Ranunculus acris*, *Silene dioica*, *Rhinanthus minor*, *Agrostis capillaris*, *Cynosurus cristatus*, *Festuca rubra*, *Phleum bertolonii*, *Poa pratensis*.

WATERING

- Water immediately after sowing.
- The first watering should ensure that the soil is damp to a depth of 100mm.
- Do not over-water as this will create boggy conditions and promote grass diseases.
- In the days following, water only in the morning and early evening.
- Water less and less frequently over the first 28 days.

Protection

- Protect seeded areas from damage caused by foot traffic until the sward has established.

GRASSLAND AFTERCARE

It is likely that the neutral grassland will require management to ensure the weed burden remains low and an appropriate management regime should be used to ensure the most successful establishment of the grassland to enhance its biodiversity value.

"Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year. Dig out any residual perennial weeds such as docks" (Emorsgate Seeds).

After the first year, instigate a regime of hay meadow style management, where the sward is cut mechanically early season during February and March and once late season September to October. Remove all arisings to avoid the build-up of fertility across the site. Wherever possible, cut the hay later one year in five (late August to September) to allow seed to set and fall back into the ground. Avoid the use of heavy machinery and use low ground pressure plant wherever practically possible to avoid ground compaction. Management by cutting is traditional for herb-rich meadows with a high wildlife value, often with aftermath grazing, which help to control the weed burden.

KEY

RED LINE BOUNDARY

PROPOSED TREE PLANTING
Plant 5No. oak (*Quercus robur*) as scattered trees atop the earth mound, to enhance biodiversity and filter views of the barn from the A6 Chorley Road and residential properties at Waterhouse Nook. See Specification for further details

PROPOSED WOODLAND TREE PLANTING
Proposed new tree planting to create connective habitat for the benefit of enhanced biodiversity across the landscape. Plant to achieve an open canopy, at a density no greater than 1100/ha, at a minimum of 3m centres. Species to include field maple (*Acer campestre*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), Rowan (*Sorbus aucuparia*) and small-leaved lime (*Tilia cordata*). See Specification for further details.

PROPOSED NEUTRAL GRASSLAND
Establish a neutral grassland by over sowing with a seed mix, following soil testing. The seed mix, such as EM2 Standard General-Purpose Meadow Mixture, could contain the following (but not limited to) commonly occurring neutral grassland species, depending upon the findings of the soil testing across the application site.

Species to include: *Agrostis capillaris*, *Alopecurus pratensis*, *Anthoxanthum odoratum*, *Centaurea nigra*, *Cynosurus cristatus*, *Dactylis glomerata*, *Galium verum*, *Leucanthemum vulgare*, *Lolium perenne*, *Lotus corniculatus*, *Poa spp*, *Ranunculus acris*, *Schedonorus pratensis*, *Trifolium pratense*.

Sow according to manufacturer's recommendations and manage by carrying out a single late summer hay cut, where access allows, to allow the flowers to set seed, using a strimmer and leave the hay on the ground to dry and allow the seeds to fall back into the soil.

NOTES

THIS DRAWING IS SOLELY FOR THE INFORMATION TITLED & IS BASED UPON RECOMMENDATIONS ARISING FROM THE BIODIVERSITY NET-GAIN ASSESSMENT CARRIED OUT IN NOVEMBER 2023.

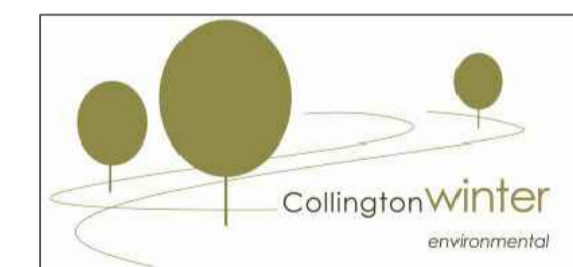
PROPOSED LAYOUTS & TREE LOCATIONS ARE BASED UPON THIRD PARTY SURVEY INFORMATION. THE ACCURACY OF WHICH IS NOT UNDERWRITTEN BY COLLINGTON WINTER LTD.

TREE & HEDGEROW PLANTING LAYOUTS & SPECIES ARE PROVIDED FOR PRELIMINARY GUIDANCE ONLY. PLANTING POSITIONS SHOULD BE MARKED OUT AND AGREED ON SITE PRIOR TO PLANTING, FOLLOWING SOIL TESTING. WHERE EXISTING TREES OR HEDGEROWS ARE IN-SITU, ENSURE THAT THE ROOT PROTECTION AREA OF THOSE EXISTING TREES IS PROTECTED.

REFER TO ENGINEERS DRAWINGS FOR DETAILED LEVELS, DRAINAGE, FORMATION, BUILDUP, RETAINING STRUCTURES, SERVICES AND SURFACE FINISH DETAILS.

THIS PLAN HAS BEEN PREPARED FOR SUBMISSION TO THE LOCAL AUTHORITY FOR TOWN & COUNTRY PLANNING ONLY AND DOES NOT CONSTITUTE A FULL WORKING DRAWING

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PROJECT
Land at Goodman Fold Farm

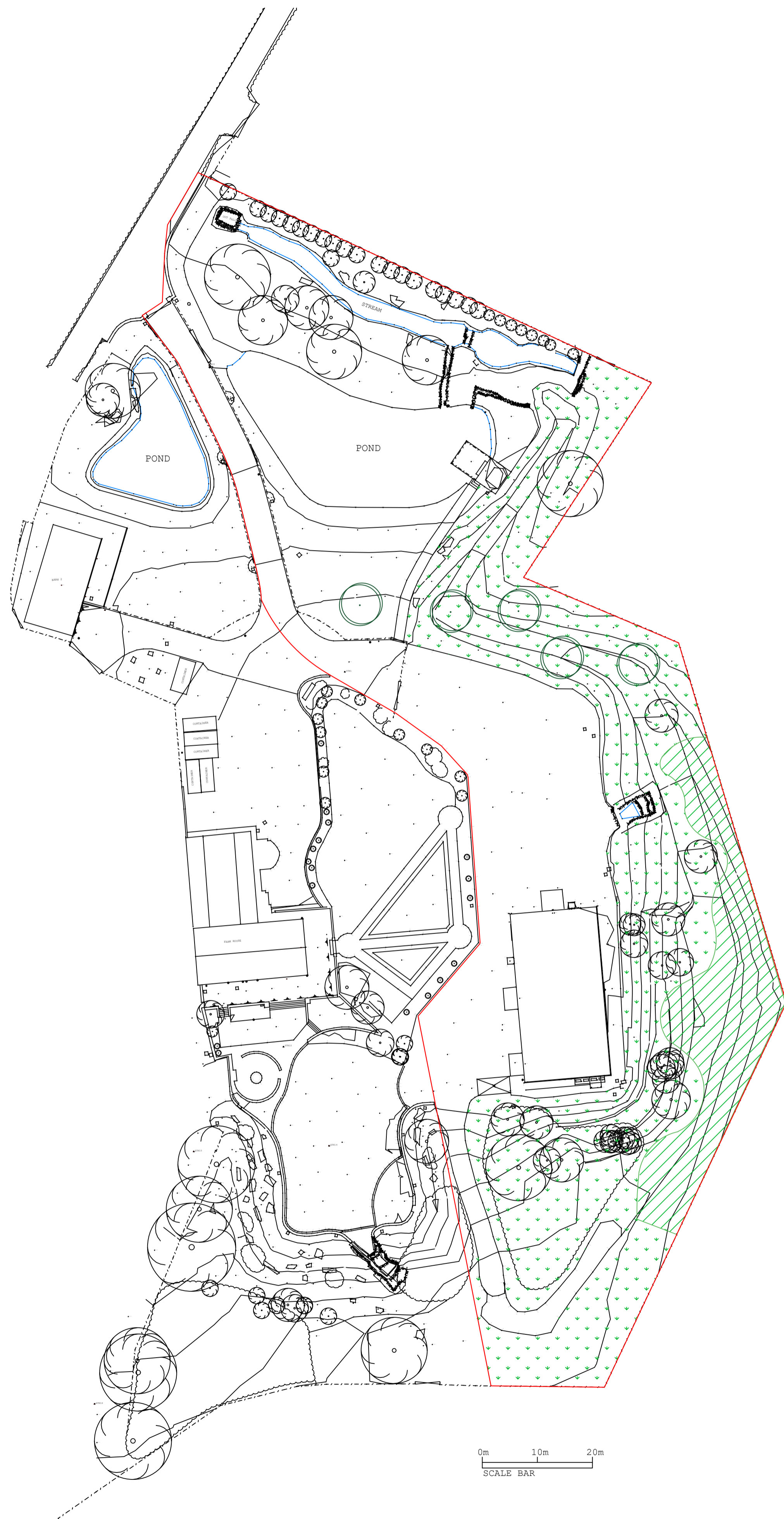
TITLE
Softworks Landscape Plan

SCALE DATE
See Scale Bar December 2023

DRAWN BY CHECKED BY
JW OC

DRAWING NO. REVISION
CW0258-D-001

FOR PLANNING - DO NOT SCALE FROM THIS DRAWING



PLANTING SCHEDULE

SCATTERED TREE PLANTING

Ref	Species	Form	Transplanted	Height/Spread (cm)	Girth (cm)	Root condition	Total
Que rob	<i>Quercus robur</i>	Standard (standard)	2x	200-250	6 - 8	RB	5

WOODLAND TREE PLANTING

Ref	Species	Form	Transplanted	Height/Spread (cm)	Root condition	Total
Ace cam	<i>Acer campestre</i>	Transplant	1+1	60-80	BR	20
Cor ave	<i>Corylus avellana</i>	Transplant	1U1	60-80	BR	15
Cra mon	<i>Crataegus monogyna</i>	Transplant	1+1	60-80	BR	35
Sor auc	<i>Sorbus aucuparia</i>	Transplant	1+1	60-80	BR	15
Til cor	<i>Tilia cordata</i>	Transplant	1+1	60-80	BR	10