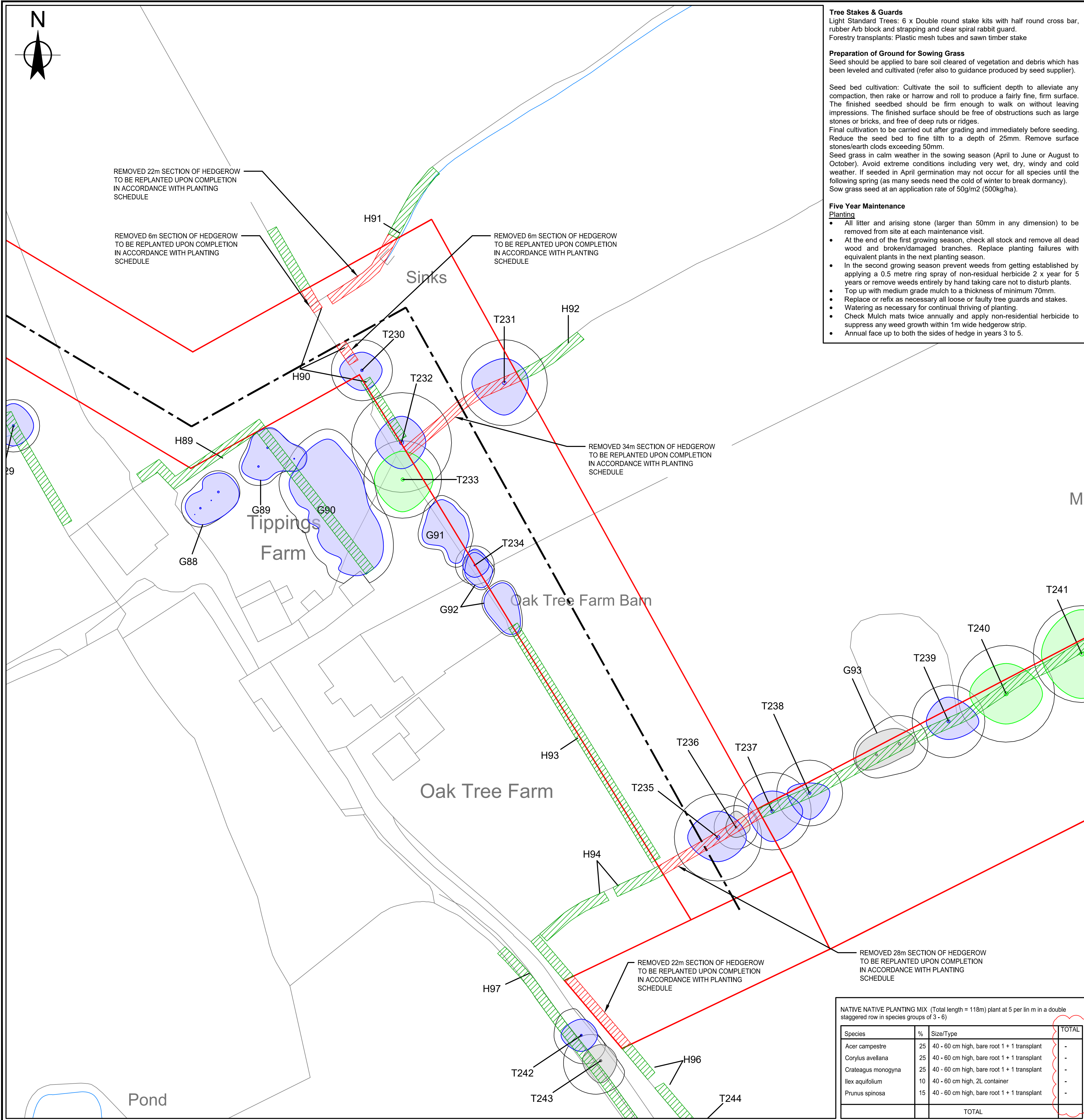




Tree Stakes & Guards
Light Standard Trees: 6 x Double round stake kits with half round cross bar, rubber Arb block and strapping and clear spiral rabbit guard.
Forestry transplants: Plastic mesh tubes and sawn timber stake

Preparation of Ground for Sowing Grass
Seed should be applied to bare soil cleared of vegetation and debris which has been leveled and cultivated (refer also to guidance produced by seed supplier).

Seed bed cultivation: Cultivate the soil to sufficient depth to alleviate any compaction, then rake or harrow and roll to produce a fairly fine, firm surface. The finished seedbed should be firm enough to walk on without leaving impressions. The finished surface should be free of obstructions such as large stones or bricks, and free of deep ruts or ridges.
Final cultivation to be carried out after grading and immediately before seeding. Reduce the seed bed to fine tilth to a depth of 25mm. Remove surface stones/earth clods exceeding 50mm.
Seed grass in calm weather in the sowing season (April to June or August to October). Avoid extreme conditions including very wet, dry, windy and cold weather. If seeded in April germination may not occur for all species until the following spring (as many seeds need the cold of winter to break dormancy). Sow grass seed at an application rate of 50g/m2 (500kg/ha).

- Five Year Maintenance Planting**
- All litter and arising stone (larger than 50mm in any dimension) to be removed from site at each maintenance visit.
 - At the end of the first growing season, check all stock and remove all dead wood and broken/damaged branches. Replace planting failures with equivalent plants in the next planting season.
 - In the second growing season prevent weeds from getting established by applying a 0.5 metre ring spray of non-residual herbicide 2 x year for 5 years or remove weeds entirely by hand taking care not to disturb plants.
 - Top up with medium grade mulch to a thickness of minimum 70mm.
 - Replace or refix as necessary all loose or faulty tree guards and stakes.
 - Watering as necessary for continual thriving of planting.
 - Check Mulch mats twice annually and apply non-residential herbicide to suppress any weed growth within 1m wide hedgerow strip.
 - Annual face up to both the sides of hedge in years 3 to 5.

General Planting Notes

All plants and planting operations to comply with the requirements and recommendations of all current relevant British Standard specification including but not limited to:

- BS 3936-1:1992 Nursery stock. Specification for trees and shrubs
- BS 3882: 2015 Specification for topsoil and requirements for use
- BS 8601:2013 Specification for subsoil and requirements for use (excluding hard surfaces)
- BS 4428:1989. Code of practice for general landscape operations (Trees in relation to Design, Demolition and Construction).

• All the following works to be in accordance with C08 Landscape Works

General: Carry out the soft landscape works while soil and weather conditions are suitable. Early spring or autumn are ideal times when weather is generally mild, not too wet or too dry. Avoid extreme conditions including very wet, dry, windy and cold weather.

Site Clearance
Remove compound and temporary access track, to full depth. Surplus vegetation will be cleared, by spraying with a suitable non residual translocated herbicide and or strimming and raking. Surface of all land affected, to be broken up to the minimum depth below finished levels to provide a clear rooting zone to minimum depths as detailed below :

- Grass, ground cover and perennial planting: 500mm
- Shrub planting: 750mm
- Within 2 m of tree planting: 1000mm

Prior to spreading subsoil the receiving area shall be loosened by deep ploughing or using ripping equipment. Stones and extraneous material greater than 50mm in size shall be cleared from subsoil, before placing of topsoil.

Spreading topsoil
Depth: 150 mm to grassed/re-instated areas maximum after firming and settlement and max. 400mm depth of topsoil to shrubs, hedgerows, and tree planting.
Gently firm each layer of max. 150mm thick before spreading the next. Topsoil should not exceed 400mm depth to avoid anaerobic conditions which will affect planting establishment and long term growth. Subsoil should be used beneath the max. 400mm depth of topsoil to provide clear rooting zones. Soil structure: Do not compact topsoil. Avoid trafficking as far as practical over areas of spread topsoil to preserve a friable texture of separate visible 'crumbs'. Areas disturbed as part of the works and/or areas stripped of topsoil may have been compacted. Subsoil should be cultivated to loosen the surface prior to the spreading of topsoil to the required depth.

Hedgerow Planting
Hedgerow replacement planting will consist of native species and be of local provenance where available and will aim to support or improve species diversity locally. A suitable species mixture will be determined with reference to existing hedgerow species found in the local area and adjacent field boundaries.

Ground Preparation
A one meter wide strip should be cultivated, rotivated or sprayed off (systemic herbicide) prior to planting.

Planting
Plant bare-rooted 'whips' (60-80cm sized plants) at a rate of five plants per linear metre in a double row (rows set 40-50cm apart) with plants staggered in the rows (set approximately 50cm apart). Plant 10 or 12 plants (2 metres length) of 'thorn' species interspersed with 5 or 6 species (1 meter length) of 'other' species. Make a vertical 'I', 'L', 'T' or 'H' notch one spade width to accommodate full depth of roots. Plant tree or shrub, close notch with root collar at ground level and firm the soil in with heel to ensure good contact with the soil.

In time, this will give a thick dense stock-proof hedge that will have maximum wildlife value. The best time to plant is from November to February.

Replacement hedgerow planting will be undertaken in the first planting season following completion of works in each area.

Rabbit Protection
Spiral guards to be installed to all hedgerow trees and shelter guards to all hedgerow shrubs, in accordance with the manufacturers recommendations and with suitable supports (bamboo cane or timber stake).

Mulch Mats
All hedgerow species to have biodegradable mulch mats installed in accordance with the manufacturers recommendations.

Fencing
Existing field boundaries to be extended across reinstated areas to provide full enclosure and reinstate previous boundary conditions. Fences to ensure new planting is protected from livestock, where applicable. Fence materials and heights to match adjacent fences.

Shrub Planting
Shrubs to be planted in pits backfilled with compost/ topsoil mix and transplants to be notch planted in I,T,L or H shaped notch.
All shrubs and transplants to receive 30g slow release fertilizer at time of planting
Insert 4 No. 12 month slow release fertilizer tablets per shrub pit.

Tree Planting
All trees to be planted with adequate clearance from roots (when spread) or the perimeter of the root ball and the side of the pit. All bareroot stock to be planted during the dormant season (between late October and early March). The size of the pit should allow for the provision of good quality topsoil and subsoil based backfill material. The depth of the planting pit should be at least 75mm greater than the depth of the root system. The bottom of the pit should be forked over to break up the surface of the subsoil. Rootball to be placed on 100mm depth mixture of 50% topsoil (topsoil to BS 3882:2015) and 50% Horticultural grade Sharp Sand. Bare roots should be spread evenly in the pit, soil placed around the roots gently shaking tree as the pit is filled to ensure good contact between the soil and roots. Firm backfill material layer by layer as the pit is filled taking care to avoid damaging roots.

Backfill material: Backfill material should comprise primarily dry/friable laid topsoil to BS 3882:2015 (with a PH value 6.0 to 7.0) to max. depth of 300/400mm. Below this depth subsoils to BS 8601:2013 are to be used and the texture and characteristics should not differ dramatically from native soils. Trees should be planted into friable soil of high organic content. In circumstances where such soil conditions do not exist, the soil should be improved by the addition of compost to the top 300/400mm depth of the rooting zone. Must be PEAT FREE. Mix suitable tree fertilizer to backfill material in each tree pit to manufacturer's recommendations.

Mulch
A 70 mm layer of medium sized mulch applied around the base of each plant 1000 mm dia.

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES
ADD UNLESS NOTED OTHERWISE.

LEGEND

- COMPOUNDS AND WORKING AREAS
- PROPOSED PIPELINE ROUTE
- EXISTING TREES TO BE RETAINED AND PROTECTED (for the duration of construction in accordance with BS5837:2012)
- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- ROOT PROTECTION AREA (RPA)
- EXISTING HEDGEROW TO BE RETAINED
- PROPOSED NATIVE TREE PLANTING
- WORKING AREA - Sown with Germinial Seeds RE2 - Lowland Meadow (MG9 NVC Grassland) - Returned to agriculture
- HEDGEROW TO BE REMOVED

SCALE 1 : 500

m10 0 40m

CURRENT ISSUE INFORMATION

C01	SG	JT	MS	For Information	23/12/20
VERSION	AUTH	CHKD	REVD	REASON FOR ISSUE	DATE
A		Issued for Construction			
SUITABILITY CODE		SUITABILITY DESCRIPTION			

United Utilities
Water for the North West

advance plus

ALSTON SPADE MILL TRANSFER PIPELINE
HEDGEROW REMOVAL PLAN
SHEET 20

SCALE 1:500	SHEET SIZE A1
DRAWING NUMBER 80062958-01-ADP-MISCE-97-DR-T-00071	REVISION C01