

OUTLINE SPECIFICATION

GENERAL

ALL OPERATIONS WILL BE CARRIED OUT BY A COMPETENT AND QUALIFIED LANDSCAPE CONTRACTOR IN LINE WITH BEST PRACTICE METHODS SUITABLE FOR THE WORKS AS OUTLINED BELOW:

IN ADDITIONAL TO THOSE STANDARDS LISTED WITHIN THE SPECIFICATION, ALL WORKS TO CONFORM TO THE FOLLOWING BRITISH STANDARDS:-

- BS 3882 - SPECIFICATION FOR TOPSOIL
- BS 3969 - RECOMMENDATIONS FOR TURF FOR GENERAL PURPOSES
- BS 3998 - RECOMMENDATIONS FOR TREE WORK
- BS 4428:1989 - GENERAL LANDSCAPE OPERATIONS EXCLUDING HARD SURFACES
- BS 5837 - TREES IN RELATION TO CONSTRUCTION - RECOMMENDATIONS

VEGETATION PROTECTION

ALL EXISTING VEGETATION TO BE RETAINED IN LINE WITH THE RECOMMENDATIONS OF BS 5837. THE POSITION OF THE FENCING WILL BE AS SET OUT WITH SUBMITTED ARBORICULTURAL ASSESSMENT AND METHOD STATEMENT AND REMAIN IN PLACE UNTIL ALL SITE WORKS ARE COMPLETE.

SITE PREPARATION

SOILS

EXISTING SOIL TO BE UTILISED ON SITE WHERE POSSIBLE AND SHOULD BE TO THE FOLLOWING MINIMUM DEPTHS:-

- TREES - 1M (400MM TOPSOIL)
- SHRUBS - 600MM (300MM TOPSOIL)
- GRASS AREA - 300MM (150MM TOPSOIL)
- WILDFLOWER GRASSLAND MEADOW AREA- 150MM TOPSOIL/ SUBSOIL 50:50 MIXTURE TO PROVIDE A LOW FERTILITY SEED BED.

MANAGEMENT OF SOILS WITHIN THE SITE. MAINTAINING THE QUALITY OF THE DIFFERENT SOIL RESOURCE AND SUITABILITY FOR RE-USE WITHIN THE PROJECT IS COVERED WITHIN THE SOIL MANAGEMENT PLAN DOC REF:HTR-FUW-P2-RE-RM-W-0006. AS SET OUT WITH PARA 1.0.4 & 1.0.5. SOIL RE-USE REQUIREMENTS AND RESOURCE ARE COVERED IN SECTION 5 AND TABLE 2. PROCEDURES FOR STRIPPING, STORING AND REPLACING SOILS SEE SECTION 6.

THE TOP 300MM LAYER OF COMPACTED TOPSOIL IN PLANTING AREA SHALL BE BROKEN UP PRIOR TO PLANTING. NO DIGGING OR SOIL CULTIVATION SHALL BE CARRIED OUT WITHIN THE ROOT SPREAD OF TREES AND SHRUBS TO BE RETAINED.

ALL PLANTS IN CONTAINERS WILL BE WATERED PRIOR TO PLANTING.

ALL PLANTING AREAS WILL BE HAND STONE PICKED BEFORE PLANTING COMMENCES.

STORAGE OF SOIL

SITE WON TOPSOIL WILL BE STORED IN LOCATIONS AS AGREED BY THE SITE MANAGER AND IN LINE WITH THE SOIL MANAGEMENT PLAN DOC REF: HTR-FUW-P2-RE-RM-W-0006

TREE AND SHRUB PLANTING

TIMING OF TREE PLANTING

ROOTBALLED TREES TO BE PLANTED NOVEMBER TO APRIL.

CONIFERS/ EVERGREENS/ CONTAINERISED PLANTING STOCK TO BE PLANTED SEPTEMBER/ OCTOBER OR APRIL/ MAY.

PREPARATION OF TREE PITS

APPROXIMATELY 1.0M X 1.0M X 1.0M DEEP, OR SUFFICIENT TO ALLOW 500MM CLEARANCE AROUND THE ROOTS. THE SOIL AT THE BASE OF THE PIT TO BE BROKEN UP BEFORE THE ROOTBALL IS POSITIONED.

ALL TREE PITS SHALL BE BACKFILLED WITH TOPSOIL EXCAVATED FROM THE PIT AND ADDITIONAL TOPSOIL AS REQUIRED.

COMPOST

50 LITRES OF TREE PLANTING COMPOST TO BE SUPPLIED TO EACH PIT BEFORE SOIL IS BACKFILLED AND FIRMED AT A RATE OF ONE PART TREE PLANTING COMPOST TO THREE PARTS SOIL.

STAKES TO STANDARD TREES

STAKES TO BE SUPPLIED, MACHINE ROUNDED, POINTED AND TANALISED, 1800MM LONG WITH 600MM BELOW GROUND. STAKES TO BE FIXED USING A BUCKLE, TREE TIE AND SPACER.

TUBES TO ALL TREES

ALL TREES TO BE PLANTED IN ATLEAST 1.5M HIGH TUBES.

NATIVE PLANTING

TIMING OF PLANTING

DECIDUOUS SHRUBS TO BE PLANTED LATE OCTOBER TO MARCH/ APRIL.

EVERGREEN SHRUBS TO BE PLANTED SEPTEMBER / OCTOBER OR MARCH / MAY.

WOODLAND/ WET WOODLAND PLANTING

UNDERSTOREY PLANTING TO BE PLANTED TO FOREST ENGLAND RECOMMENDATIONS AT 2M CENTRES.

TREE CANOPIES TO BE PLANTED BETWEEN 9-12M APART.

ALL HONEYBUCKLE (LONICERA PERICLYMENUM) TO BE PLANTED AT BASE OF 3M HIGH STANDARD CANOPY TREES AND EVENLY SPACED.

SHRUB PLANTING PITS

SIZE OF PIT WIDE ENOUGH TO ACCOMMODATE ROOTS WHEN FULLY SPREAD AND 75MM DEEPER THAN ROOT SYSTEM. BREAK UP BASE OF PIT TO A DEPTH OF 150MM, INCORPORATING 25G SLOW-RELEASE FERTILISER PER PLANTS PIT. BACKFILLING MATERIAL. RE-USE EXCAVATED MATERIAL.

SCRUB PLANTING

TO BE PLANTED IN ACCORDANCE TO FORESTRY ENGLAND RECOMMENDATIONS AT 1.5M CENTRES.

MINIMUM OF 4M BUFFER OF SCRUB EDGE ALONG NORTH-EAST OF WETLAND.

HEDGEROW PLANTING

PLANTED AT 6 PER LINEAR METRE, 300MM CENTRES AT 300MM ROWS APART. TRANSPLANTS TO INCLUDE SHELTERS, STAKES AND TIES. WEEDS TO BE CONTROLLED USING MULCHED MATS.

MARGINALS-AQUATIC PLANTING

POSITION MARGINAL PLANTING/ SEEDING ALONG THE BOUNDARY OF THE WETLAND AT WATERS EDGE (BETWEEN 38.5M AND THE 39.5M CONTOUR LEVEL).

PLANTS SHOULD BE PLANTED TO THE SAME DEPTH AS IN THE ORIGINAL CONTAINER.

WATERING

ALL PLANTED AREAS WILL BE WATERED AS APPROPRIATE AFTER PLANTING.

PLANT PROTECTION

CONTRACTOR TO REVIEW THE SITE AND CONTEXT TO INFORM PLANT PROTECTION STRATEGY. TREE / SHRUB SHELTERS OR PROTECTIVE FENCING.

SEEDING

TIMING OF SEEDING

SEEDING WORK WILL BE CARRIED OUT IN THE APPROPRIATE GROWING SEASON AND WHEN WEATHER CONDITIONS ARE SUITABLE. SEED MIX IN ACCORDANCE WITH SUPPLIER'S RECOMMENDATION.

PREPARATION FOR SEEDING

THE CONTRACTOR SHALL ENSURE THAT ALL GRASS SEEDED AREAS DEVELOP INTO A HEALTHY, VIGOROUS GRASS SWARD, FREE FROM THE VISIBLE EFFECTS OF PESTS, WEEDS AND DISEASE. THEY SHALL FORM A CLOSELY KNIT, CONTINUOUS GROUND COVER OF EVEN DENSITY, HEIGHT AND COLOUR.

ALL SOILED AREAS WILL BE ROTARY CULTIVATED TO AT LEAST 300MM, STONE PICKED AND PROFILED LEVEL PRIOR TO SEEDING/ TURFING. ANY AREAS WHERE MACHINERY CANNOT GAIN ACCESS WILL BE PREPARED BY HAND. NO DIGGING OR SOIL CULTIVATION SHALL BE CARRIED OUT WITHIN THE ROOT SPREAD OF TREES AND SHRUBS TO BE RETAINED.

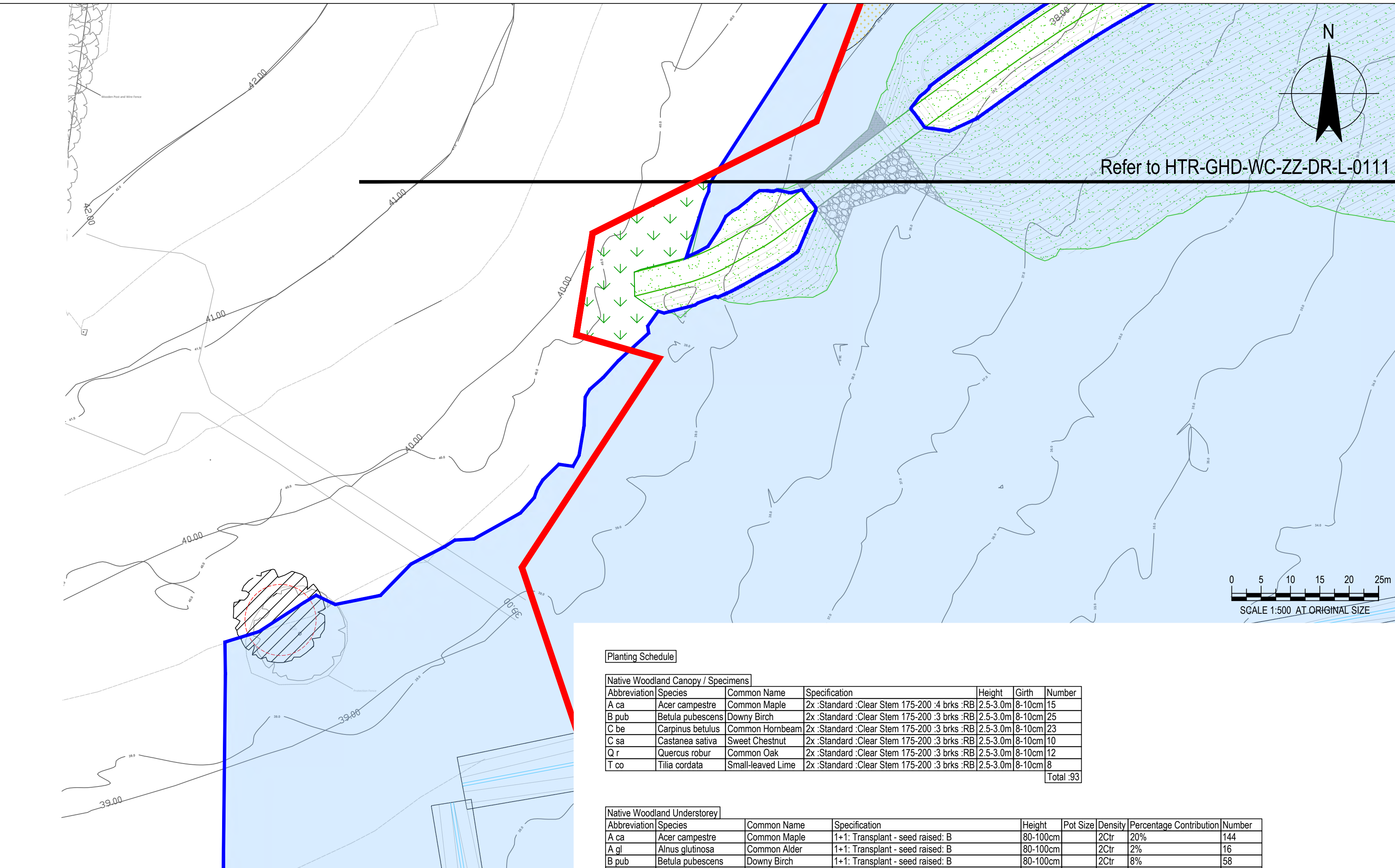
MOWING

REGULAR MOWING OF THE AMENITY GRASSLAND AREAS. MOWING ALL OR SOME OF THE SCRAPE / MARGINAL AREAS ANNUALLY MAY BE REQUIRED.

ANNUAL HAY / GRASSLAND CUT OF MEADOW HABITAT AREAS, ALLOWING FOR SEEDING BEFORE COLLECTING CUTTINGS.

WATERING

ALL GRASS AREAS WILL BE WATERED AS NECESSARY UNTIL ESTABLISHED.



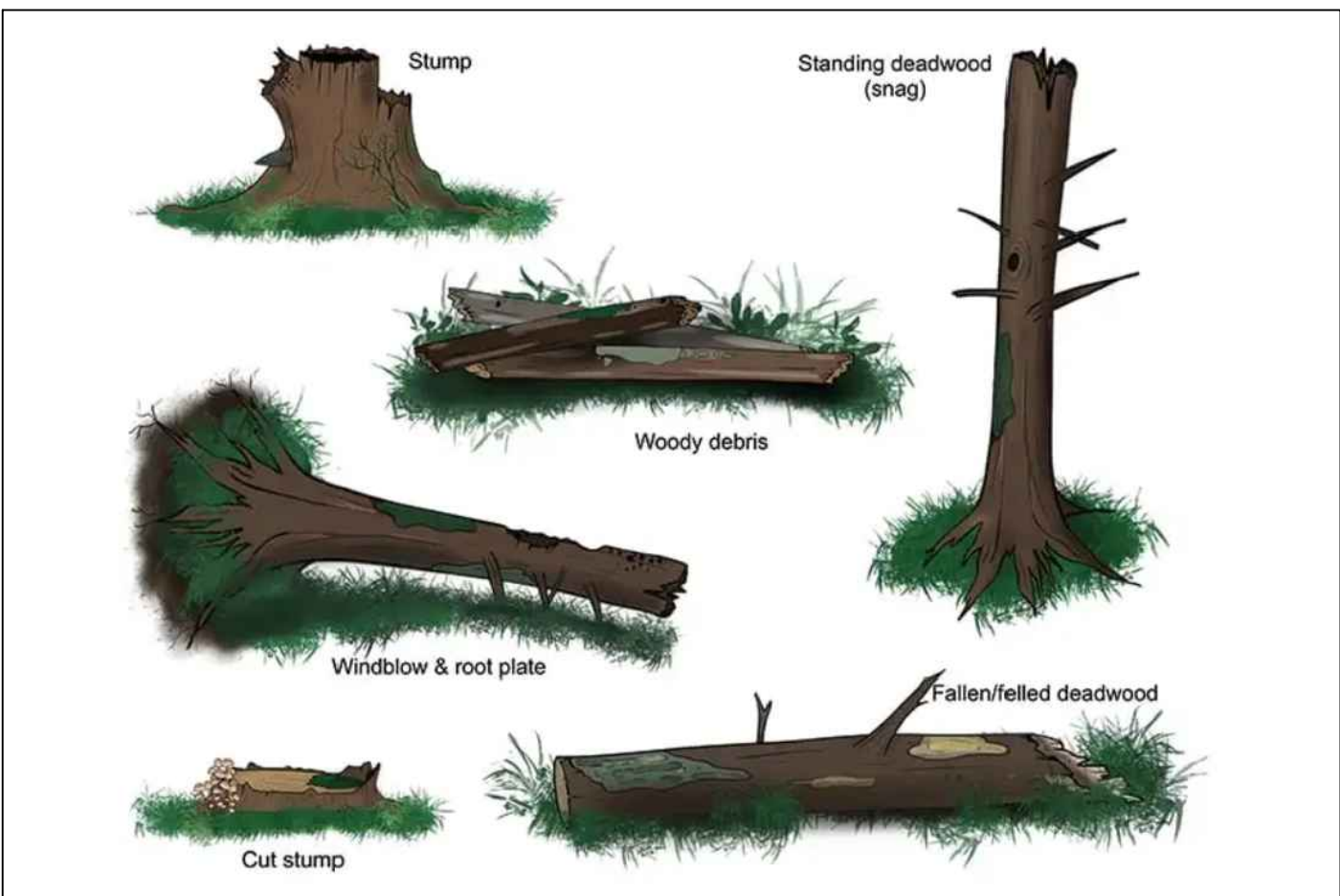
Precedent images:



Monolith feature



Hibernacula



Monolith feature

Planting Schedule

Native Woodland Canopy / Specimens		Abbreviation	Species	Common Name	Specification	Height	Girth	Number
A ca	Acer campestre	Common Maple	2x :Standard :Clear Stem 175-200 :4 brks :RB	2.5-3.0m	8-10cm	15		
B pub	Betula pubescens	Downy Birch	2x :Standard :Clear Stem 175-200 :3 brks :RB	2.5-3.0m	8-10cm	25		
C be	Carpinus betulus	Common Hornbeam	2x :Standard :Clear Stem 175-200 :3 brks :RB	2.5-3.0m	8-10cm	23		
C sa	Castanea sativa	Sweet Chestnut	2x :Standard :Clear Stem 175-200 :3 brks :RB	2.5-3.0m	8-10cm	10		
Q r	Quercus robur	Common Oak	2x :Standard :Clear Stem 175-200 :3 brks :RB	2.5-3.0m	8-10cm	12		
T co	Tilia cordata	Small-leaved Lime	2x :Standard :Clear Stem 175-200 :3 brks :RB	2.5-3.0m	8-10cm	8		
								Total :93

Native Woodland Understorey		Abbreviation	Species	Common Name	Specification	Height	Pot Size	Density	Percentage Contribution	Number
A ca	Acer campestre	Common Maple	1+1: Transplant - seed raised: B		80-100cm	2Ctr	20%			144
A gl	Alnus glutinosa	Common Alder	1+1: Transplant - seed raised: B		80-100cm	2Ctr	2%			16
B pub	Betula pubescens	Downy Birch	1+1: Transplant - seed raised: B		80-100cm	2Ctr	8%			58
C av	Corylus avellana	Common Hazel	1+2: Transplant - seed raised: Branched: 4 brks: B		80-100cm	2Ctr	30%			215
C mon	Crataegus monogyna	Common Hawthorn	1+2: Transplant - seed raised: B		80-100cm	2Ctr	7%			51
I a	Ilex aquifolium	Common Holly	Leader with Lateral: C		60-80cm	3L	2Ctr	5%		37
L per	Lonicera periclymenum	Common Honeysuckle	Caned: Several Shoots: 2 brks: C		60-80cm	2L	2Ctr	2%		16
M sy	Malus sylvestris	Common Crab Apple	1+2: Transplant - seed raised: B		80-100cm	2Ctr	4%			30
P av	Prunus avium	Wild Cherry	1+1: Transplant - seed raised: B		80-100cm	2Ctr	4%			30
Q r	Quercus robur	Common Oak	1+2: Transplant - seed raised: B		80-100cm	2Ctr	3%			23
R can	Rosa canina	Dog Rose	1+1: Transplant - seed raised: Branched: 3 brks: B		60-80cm	2Ctr	3%			23
S c	Salix caprea	Goat Willow	0/1: Cutting: Branched: 2 brks: B		80-100cm	2Ctr	3%			23
S auc	Sorbus aucuparia	Rowan	1+1: Transplant - seed raised: B		80-100cm	2Ctr	3%			23
V op	Viburnum opulus	Gelder Rose	1+2: Transplant - seed raised: Branched: 3 brks: B		80-100cm	2Ctr	6%			44
									Total :100%	Total :733

Native Wet Woodland									
Abbreviation	Species	Common Name	Specification	Height	Density	Percentage Contribution	Number		
A gl	Alnus glutinosa	Common Alder	1+1: Transplant - seed raised: B	80-100cm	2ctr	15%	296		
B pub	Betula pubescens	Downy Birch	1+1: Transplant - seed raised: B	80-100cm	2ctr	10%	199		
C san	Cornus sanguinea	Common Dogwood	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	2ctr	10%	199		
P nig	Populus nigra	Black Poplar	0/1: Cutting: B	80-100cm	2ctr	10%	199		
P tre	Populus tremula	Aspen	1+1: Transplant - seed raised: B	80-100cm	2ctr	10%	199		
R ca	Rhamnus cathartica	Common Buckthorn	1+1: Transplant - seed raised: Leader with Lateral: 3 brks: B	80-100cm	2ctr	5%	100		
S a	Salix alba	White Willow	Branched: 3 brks: C	60-80cm	2ctr	10%	199		
S c	Salix caprea	Goat Willow	0/1: Cutting: Branched: 2 brks: B	80-100cm	2ctr	15%	296		
S v	Salix viminalis	Common Osier	0/1: Cutting: Branched: 2 brks: B	80-100cm	2ctr	15%	296		
							Total :100%	Total :1983	

Native Scrub Mix		Abbreviation	Species	Common Name	Specification	Height	Pot Size	Density	Percentage Contribution	Number
A ca	Acer campestre	Common Maple	1+1: Transplant - seed raised: Branched: 2 brks: B		40-60cm	1.5Ctr	35%			1501
L per	Lonicera periclymenum	Common Honeysuckle	Caned: Several Shoots: 2 brks: C		60-80cm	2L	1.5Ctr	15%		645
R ca	Rhamnus cathartica	Common Buckthorn	1+1: Transplant - seed raised: Leader with Lateral: 3 brks: B		60-80cm	1.5Ctr	10%			431
S ci	Salix cinerea	Grey Willow	0/1: Cutting: Branched: 2 brks: B		60-80cm	1.5Ctr	20%			858
S ni	Sambucus nigra	Common Elder	1+1: Transplant - seed raised: Branched: 3 brks: B		60-80cm	1.5Ctr	10%			431
U e	Ulex europaeus	Common Gorse	Bushy: 3 brks: C		20-30cm	2L	1.5Ctr	10%		431
									Total :100%	Total :4297

Native Hedgerow		Abbreviation	Species	Common Name	Specification	Height	Pot Size	Density	Percentage Contribution	Number
A ca	Acer campestre	Common Maple	1+1: Transplant - seed raised: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	15%			66
C av	Corylus avellana	Common Hazel	1+2: Transplant - seed raised: Branched: 4 brks: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	9%			41
C mon	Crataegus monogyna	Common Hawthorn	1+2: Transplant - seed raised: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	50%			217
I a	Ilex aquifolium	Common Holly	Leader with Lateral: C		40-60cm	0.3Ctr Double Staggered at 0.3m offset	2%			10
L vu	Ligustrum vulgare	Common Privet	0/1: Cutting: Branched: 2 brks: B		40-60cm	0.3Ctr Double Staggered at 0.3m offset	2%			10
M sy	Malus sylvestris	Common Crab Apple	1+2: Transplant - seed raised: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	6%			27
Q r	Quercus robur	Common Oak	1+2: Transplant - seed raised: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	6%			27
R can	Rosa canina	Dog Rose	1+1: Transplant - seed raised: Branched: 3 brks: B		60-80cm	0.3Ctr Double Staggered at 0.3m offset	2%			10
S auc	Sorbus aucuparia	Rowan	1+1: Transplant - seed raised: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	6%			27
V op	Viburnum opulus	Gelder Rose	1+2: Transplant - seed raised: Branched: 3 brks: B		80-100cm	0.3Ctr Double Staggered at 0.3m offset	2%			10
									Total :100%	Total :445

Native Rush & Sedge Plugs								
Abbreviation	Species	Common Name	Specification	Pot Size	Density	Number		
C ac	Carex acutiformis	Lesser Pond Sedge	Plug: Established Root min. 2-3 months: Sept to April planting: British Native-origin: C	50cc min.	0.45Cr	1371		
J c	Juncus conglomeratus	Compact Rush	Plug: Established Root min. 2-3 months: Sept to April planting: British Native-origin: C	50cc min.	0.45Cr	2738		
J e	Juncus effusus	Soft Rush	Plug: Established Root min. 2-3 months: Sept to April planting: British Native-origin: C	50cc min.	0.45Cr	2056		
P au	Phragmites australis	Common Reed	Plug: Established Root min. 2-3 months: June to Sept planting: British Native-origin: C	50cc min.	0.45Cr	689		
							Total	6854

NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE (UNO).
- ALL LEVELS ARE IN METRES TO ORDNANCE DATUM UNO.

Key

39.5 contour - top water level for main reservoir

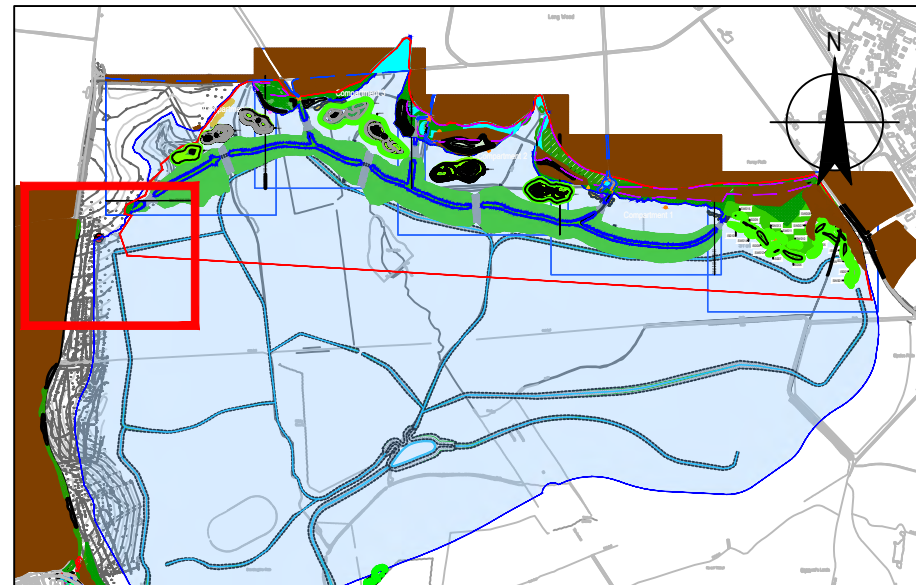
Existing
Woodland to be retained

Existing Tree to be retained (root protection area - red dashed circle)

Proposed

- Native Woodland Canopy / Specimen Trees
- Native Woodland Understorey
- Native Wet Woodland
- Native Hedgerow
- Native Scrub
- Wildflower Seeding Mix EM5
- Wet and Water Edge Mix
- Gravel and Boulders
- Native Rush & Sedge Plugs
- Location of Soil Translocation
- Access Route
- Seasonal Channels
- Stockproof Fencing
- Landscape Planting Protection Fencing
- Monoliths
- Horizontal Trunks
- Log Piles
- Fallen Branches
- Tree Stumps

Atlas - Not to scale



REFERENCE DOCUMENTS AND DRAWINGS

PLEASE REFER TO THE BELOW DRAWINGS:

HTR-GHD-WL-ZZ-DR-L-0125-0128 - LANDSCAPE CONSTRUCTION DETAILS SHEETS 1-4

HTR-GHD-WL-ZZ-DR-S-0062-65 - WETLANDS ACTIVE WATER CONTROL PENSTOCK CHAMBER DETAILS

HTR-GHD-WL-ZZ-DR-L-0052-055 - WETLANDS SPILLWAY PLANS AND SECTIONS

P03 FUTURE WATER DESIGN AMENDMENTS	SWG	SWG	06/06/2024
P02 FOR COMMENTS	SWG	SWG	15/05/2024
P01 FOR COORDINATION	SWG	SWG	17/04/2024

Rev	Description	Checked	Approved	Date
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Designer	ST			
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Client PORTSMOUTH WATER

Project HAVANT THICKET RESERVOIR

Status FOR COMMENTS

Status Code S3

Drawing Title WETLAND RETAINING STRUCTURE - LANDSCAPE CONSTRUCTION SOFTWARES SHEET 1 OF 6

Size A1

HTR-GHD-WL-ZZ-DR-L-0110

Drawing No.

Rev

P03