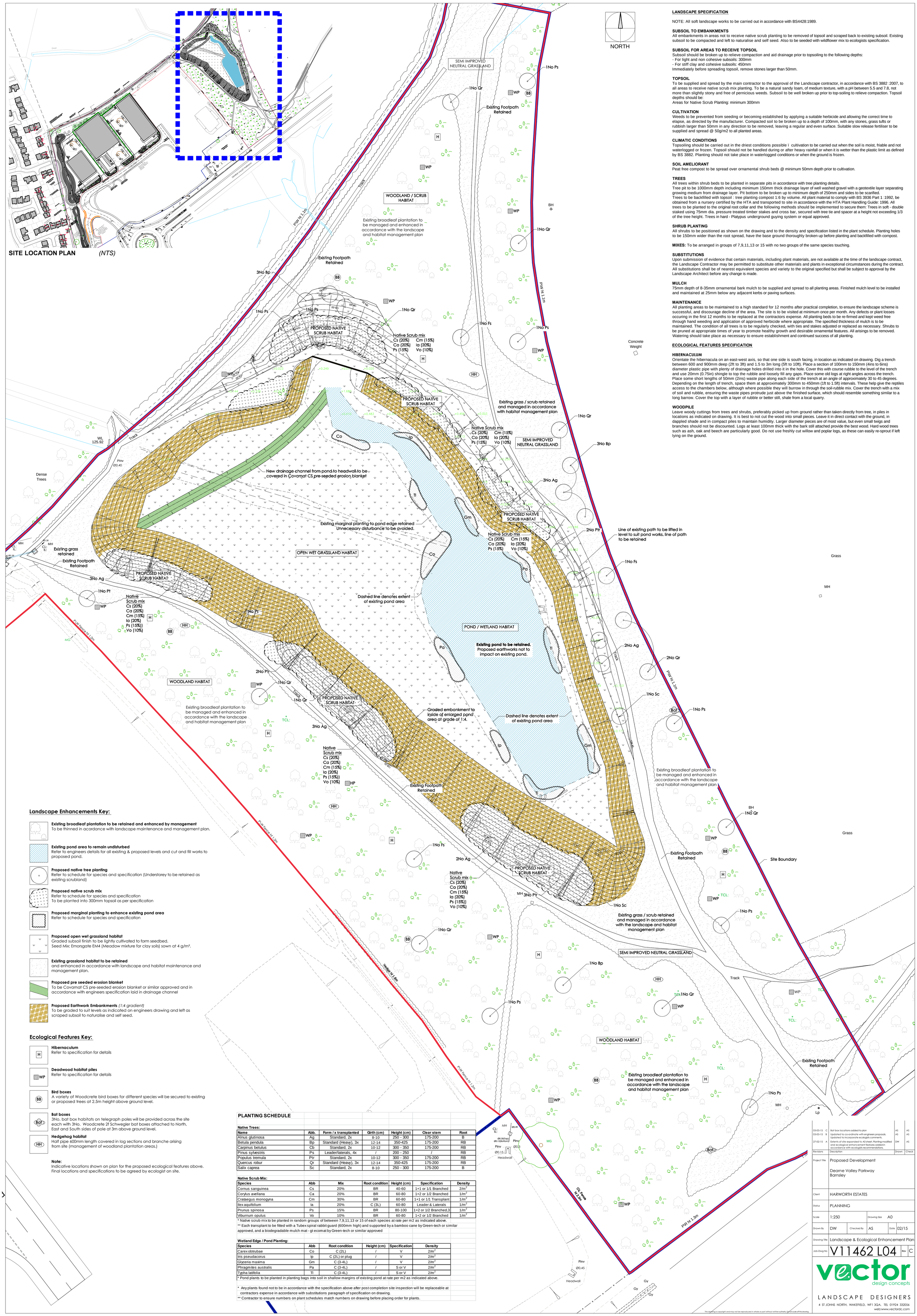

LANDSCAPE SPECIFICATION

NOTE: All soft landscape works to be carried out in accordance with BS4428:1989.

SUBSOIL TO EMBANKMENTS
All embankments in areas not to receive native scrub planting to be removed of topsoil and scraped back to existing subsoil. Existing subsoil to be compacted and left to naturalise and self seed. Also to be seeded with wildflower mix to ecologists specification.

SUBSOIL FOR AREAS TO RECEIVE TOPSOIL
Subsoil should be broken up to relieve compaction and aid drainage prior to topsoiling to the following depths:
- For light and non cohesive subsoils: 300mm
- For stiff clay and cohesive subsoils: 450mm

Immediately before spreading topsoil, remove stones larger than 50mm.

TOPSOIL
To be supplied and spread by the main contractor to the approval of the Landscape contractor, in accordance with BS 3882 :2007, to all areas to receive native scrub mix planting. To be a natural sandy loam, of medium texture, with a pH between 5.5 and 7.8, not more than slightly stony and free of pernicious weeds. Subsoil to be well broken up prior to top-soiling to relieve compaction. Topsoil depths should be:
Areas for Native Scrub Planting: minimum 300mm

CULTIVATION
Weeds to be prevented from seeding or becoming established by applying a suitable herbicide and allowing the correct time to elapse, as directed by the manufacturer. Compacted soil to be broken up to a depth of 100mm, with any stones, grass tufts or rubbish larger than 50mm in any direction to be removed, leaving a regular and even surface. Suitable slow release fertiliser to be supplied and spread @ 50g/m2 to all planted areas.

CLIMATIC CONDITIONS
Topsoiling should be carried out in the driest conditions possible ï cultivation to be carried out when the soil is moist, friable and not waterlogged or frozen. Topsoil should not be handled during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882. Planting should not take place in waterlogged conditions or when the ground is frozen.

SOIL AMELIORANT
Peat free compost to be spread over ornamental shrub beds @ minimum 50mm depth prior to cultivation.

TREES
All trees within shrub beds to be planted in separate pits in accordance with tree planting details.
Tree pit to be 1000mm depth including minimum 150mm thick drainage layer of well washed gravel with a geotextile layer separating growing medium from drainage layer. Pit bottom to be broken up to minimum depth of 250mm and sides to be scarified.
Trees to be backfilled with topsoil : tree planting compost 1:6 by volume. All plant material to comply with BS 3936 Part 1 :1992, be obtained from a nursery certified by the HTA and transported to site in accordance with the HTA Plant Handling Guide: 1996. All trees to be planted to the original root collar and the following methods should be implemented to secure them: Trees in soft - double staked using 75mm dia. pressure treated timber stakes and cross bar, secured with tree tie and spacer at a height not exceeding 1/3 of the tree height. Trees in hard - Platypus underground guying system or equal approved.

SHRUB PLANTING
All shrubs to be positioned as shown on the drawing and to the density and specification listed in the plant schedule. Planting holes to be 150mm wider than the root spread, have the base ground thoroughly broken up before planting and backfilled with compost.

MIXES: To be arranged in groups of 7,9,11,13 or 15 with no two groups of the same species touching.

SUBSTITUTIONS
Upon submission of evidence that certain materials, including plant materials, are not available at the time of the landscape contract, the Landscape Contractor may be permitted to substitute other materials and plants in exceptional circumstances during the contract. All substitutions shall be of nearest equivalent species and variety to the original specified but shall be subject to approval by the Landscape Architect before any change is made.

MULCH
75mm depth of 8-35mm ornamental bark mulch to be supplied and spread to all planting areas. Finished mulch level to be installed and maintained at 25mm below any adjacent kerbs or paving surfaces.

MAINTENANCE
All planting areas to be maintained to a high standard for 12 months after practical completion, to ensure the landscape scheme is successful, and discourage decline of the area. The site is to be visited at minimum once per month. Any defects or plant losses occuring in the first 12 months to be replaced at the contractors expense. All planting beds to be re-firmed and kept weed free through hand weeding and application of approved herbicide where appropriate. The specified thickness of mulch is to be maintained. The condition of all trees is to be regularly checked, with ties and stakes adjusted or replaced as necessary. Shrubs to be pruned at appropriate times of year to promote healthy growth and desirable ornamental features. All arisings to be removed. Watering should take place as necessary to ensure establishment and continued success of all planting.

ECOLOGICAL FEATURES SPECIFICATION

HIBERNACULUM
Orientate the hibernacula on an east-west axis, so that one side is south facing, in location as indicated on drawing. Dig a trench between 600 and 900mm deep (2ft to 3ft) and 1.5 to 3m long (5ft to 10ft). Place a section of 100mm to 150mm (4ins to 6ins) diameter plastic pipe with plenty of drainage holes drilled into it in the hole. Cover this with course rubble to the level of the trench and use 20mm (0.75in) shingle to top the rubble and loosely fill any gaps. Place some old logs at right angles across the trench. Place some short lengths of 50mm (2ins) waste pipe along each side of the trench at an angle of approximately 30 to 45 degrees. Depending on the length of trench, space them at approximately 300mm to 450mm (1ft to 1.5ft) intervals. These help give the reptiles access to the chambers below, although where possible they will burrow in through the soil-rubble mix. Cover the trench with a mix of soil and rubble, ensuring the waste pipes protrude just above the finished surface, which should resemble something similar to a long barrow. Cover the top with a layer of rubble or better still, shale from a local quarry.

WOODPILE
Leave woody cuttings from trees and shrubs, preferably picked up from ground rather than taken directly from tree, in piles in locations as indicated on drawing. It is best to not cut the wood into small pieces. Leave it in direct contact with the ground, in dappled shade and in compact piles to maintain humidity. Larger diameter pieces are of most value, but even small twigs and branches should not be discounted. Logs at least 100mm thick with the bark still attached provide the best wood. Hard wood trees such as ash, oak and beech are particularly good. Do not use freshly cut willow and poplar logs, as these can easily re-sprout if left lying on the ground.

Landscape Enhancements Key:

- **Existing broadleaf plantation to be retained and enhanced by management** — To be thinned in acordance with landscape maintenance and management plan.
- **Existing pond area to remain undisturbed** — Refer to engineers details for all existing & proposed levels and cut and fill works to proposed pond.
- **Proposed native tree planting** — Refer to schedule for species and specification (Understorey to be retained as existing scrubland)
- **Proposed native scrub mix** — Refer to schedule for species and specification. To be planted into 300mm topsoil as per specification
- **Proposed marginal planting to enhance existing pond area** — Refer to schedule for species and specification
- **Proposed open wet grassland habitat** — Graded subsoil finish to be lightly cultivated to form seedbed. Seed Mix: Emorsgate EM4 (Meadow mixture for clay soils) sown at 4 g/m².
- **Existing grassland habitat to be retained** and enhanced in accordance with landscape and habitat maintenance and management plan.
- **Proposed pre seeded erosion blanket** — To be Covamat CS pre-seeded erosion blanket or similar approved and in accordance with engineers specification laid in drainage channel
- **Proposed Earthwork Embankments** *(1:4 gradient)* — To be graded to suit levels as indicated on engineers drawing and left as scraped subsoil to naturalise and self seed.

Ecological Features Key:

- **Hibernaculum** (H) — Refer to specification for details
- **Deadwood habitat piles** (WP) — Refer to specification for details
- **Bird boxes** (BB) — A variety of Woodcrete bird boxes for different species will be secured to existing or proposed trees at 2.5m height above ground level.
- **Bat boxes** (Bat) — 3No. bat box habitats on telegraph poles will be provided across the site each with 3No. Woodcrete 2f Schwegler bat boxes attached to North, East and South sides of pole at 3m above ground level.
- **Hedgehog habitat** (HH) — Half pipe 600mm length covered in log sections and branche arising from site (management of woodland plantation areas.)

Note:
Indicative locations shown on plan for the proposed ecological features above. Final locations and specifications to be agreed by ecologist on site.

PLANTING SCHEDULE

Native Trees:

Name	Abb.	Form / x transplanted	Girth (cm)	Height (cm)	Clear stem	Root
Alnus glutinosa	Ag	Standard, 2x	8-10	250 - 300	175-200	B
Betula pendula	Bp	Standard (Heavy), 3x	12-14	350-425	175-200	RB
Carpinus betulus	Cb	Standard, 2x	10-12	300 - 350	175-200	RB
Pinus sylvestris	Ps	Leader/laterals, 4x	/	200 - 250	/	RB
Populus tremula	Ptr	Standard, 2x	10-12	300 - 350	175-200	RB
Quercus robur	Qr	Standard (Heavy), 3x	12-14	350-425	175-200	RB
Salix caprea	Sc	Standard, 2x	8-10	250 - 300	175-200	B

Native Scrub Mix:

Species	Abb	Mix	Root condition	Height (cm)	Specification	Density
Cornus sanguinea	Cs	20%	BR	40-60	1+1 or 1/1 Branched	2/m²
Corylus avellana	Ca	20%	BR	60-80	1+2 or 1/2 Branched	1/m²
Crataegus monogyna	Cm	30%	BR	60-80	1+1 or 1/1 Transplant	1/m²
Ilex aquifolium	Ia	20%	C (3L)	60-80	Leader & Laterals	1/m²
Prunus spinosa	Ps	15%	BR	80-100	1+2 or 1/2 Branched,3	1/m²
Viburnum opulus	Vo	10%	BR	60-80	1+2 or 1/2 Branched	1/m²

* Native scrub mix to be planted in random groups of between 7,9,11,13 or 15 of each species at rate per m2 as indicated above.
** Each transplant to be fitted with a Tubex spiral rabbit guard (600mm high) and supported by a bamboo cane by Green-tech or similar approved, and a biodegradable mulch mat - gt ecomat by Green-tech or similar approved

Wetland Edge / Pond Planting:

Species	Abb	Root condition	Height (cm)	Specification	Density
Carex obtrubae	Co	C (2L)	/	V	2/m²
Iris pseudacorus	Ip	C (2L) or plug	/	V	2/m²
Glyceria maxima	Gm	C (3-4L)	/	V	2/m²
Phragmites australis	Pa	C (3-4L)	/	S or V	2/m²
Typha latifolia	Tl	C (3-4L)	/	S or V	2/m²

* Pond plants to be planted in planting bags into soil in shallow margins of existing pond at rate per m2 as indicated above.

* Any plants found not to be in accordance with the specification above after post completion site inspection will be replaceable at contractors expense in accordance with substitutions paragraph of specification on drawing.
** Contractor to ensure numbers on plant schedules match numbers on drawing before placing order for plants.

Revisions	Description	Drawn	Check
03-03-15 C	Bat box locations added to plan	AS	AS
03-03-15 B	Updated to co-ordinate with engineers proposals. Updated to incorporate ecologists comments.	AS	AS
27-02-15 A	Extents of site expanded to A0 sheet. Planting modified and ecological enhancement features added in accordance with ecologists recommendations.	DW	AS

Project Title	Proposed Development Dearne Valley Parkway Barnsley				
Client	HARWORTH ESTATES				
Status	PLANNING				
Scale	1:250	Drawing Size	A0		
Drawn By	DW	Checked By	AS	Date	02/15
Drawing Title	Landscape & Ecological Enhancement Plan				
Job-Dwg No	V11462 L04	Rev	C		

vector design concepts

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