

Key

-  Existing trees retained
-  Existing hedgerows retained
-  Existing native tree belt planting
-  Phase 2 native tree belt planting
-  Phase 2 hedgerow planting
-  Phase 3 native tree belt planting
-  Individual tree planting
-  Low maintenance grassland
-  Wildflower grassland

PLANTING SPECIFICATION

EXISTING TREES AND HEDGES ETC: All existing trees and hedges to be retained should be fully fenced and protected prior to the commencement of any works in accordance with BS5837 (2012) 'Trees in relation to design, demolition and construction - Recommendations'.

STRIPPING EXISTING TOPSOIL: Excavate existing topsoil from required areas and keep separate from excavated subsoil. All soil stripping, movement, spreading and cultivation is to be carried out only when the soil is dry and friable.

Appropriate earthmoving machinery is to be used to minimise damage and compaction to existing soil structure during stripping and stockpiling operations. Machinery should not run over areas to be stripped. Mechanical handling of stripped soils should be kept to a minimum. Do not strip soil from beneath canopy of trees to be retained or from areas where trees have stood. Do not strip soil from areas where the soil is heavily rutted or obviously compacted.

Stripped soil for reuse shall be stored in heaps not exceeding 2.0m in height. The storage area shall be cleaned of all waste and vegetation in advance. The soil should be placed in an 'as dug' condition and should not be re-worked in any way that is liable to cause compaction. Weed growth should be controlled with a glyphosate based herbicide during storage and prior to re-spreading.

TOPSOIL SPREADING & CULTIVATION: Thoroughly loosen sub-soil before spreading top-soil to allow free drainage and root penetration. Spread and grade all soils to smooth flowing finished contours. Cultivate to full depth and remove large stones and unwanted material over 50 mm diameter and dispose.

Make up any soil shortages with imported Multipurpose Topsoil to BS 3882: 2015. Sample and source to be approved before bulk delivery to site.

MINIMUM SOIL REQUIREMENTS:

	Topsoil	Loosened Subsoil
Grassland areas	150mm depth	300mm depth
Tree planting areas	300mm depth	600mm depth
Standard/feathered	1200mm dia. x	
tree pits	750 depth	

PLANTS & PLANTING: All plants and planting to comply with the requirements of current/relevant British Standard Specifications including BS 3936: Parts 1 & 4 (Nursery Stock) and BS 4428: 1989 (General Landscape Operations). All planting to be carried out within the recognised planting season (November to March). All to be British Grown stock and fully hardened off. All native species to be of local origin. (Forestry Commission Seed Zone 304).

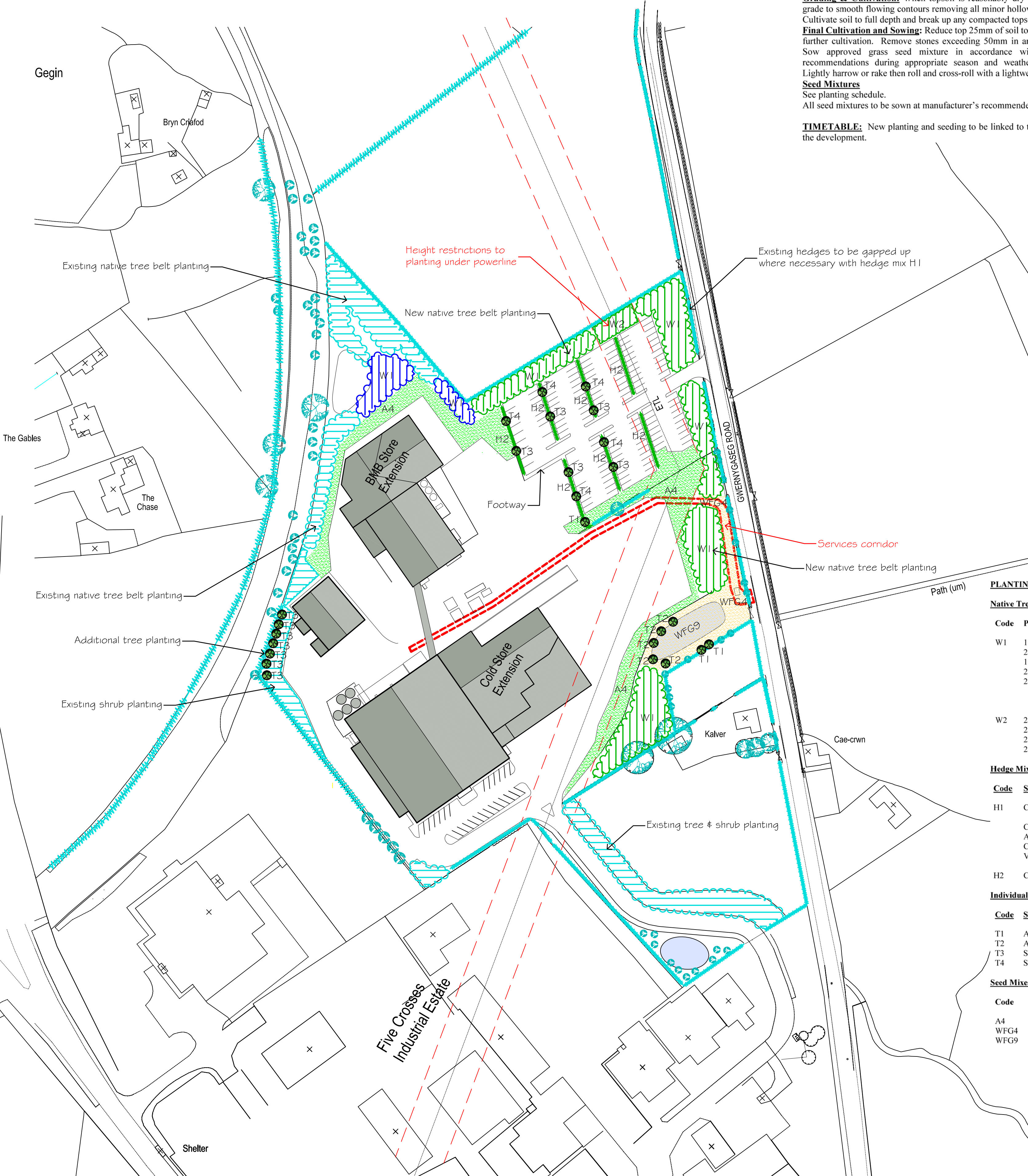
Root Dip: Proprietary root dip applied to all bare-rooted stock (1) at time of lifting at nursery and (2) prior to planting.

Watering: Thoroughly water-in all newly planted stock immediately after planting.

Tree Stakes and Ties: Stakes - to be pressure treated, round, smooth and peeled Larch or Chestnut, not less than 100mm diameter. Use proprietary tree ties applied in accordance with manufacturer's recommendations.

Tree & shrub protection

All newly planted stock to be fully protected from rabbit damage by the use of proprietary tree/shrub guards applied in accordance with the manufacturer's recommendations.



GRASS SEEDING: Generally to BS 4428.
Grading & Cultivation: When topsoil is reasonably dry and workable grade to smooth flowing contours removing all minor hollows and ridges. Cultivate soil to full depth and break up any compacted topsoil.
Final Cultivation and Sowing: Reduce top 25mm of soil to a fine tilth by further cultivation. Remove stones exceeding 50mm in any dimension. Sow approved grass seed mixture in accordance with supplier's recommendations during appropriate season and weather conditions. Lightly harrow or rake then roll and cross-roll with a lightweight roller.
Seed Mixtures
See planting schedule.
All seed mixtures to be sown at manufacturer's recommended rates.

TIMETABLE: New planting and seeding to be linked to the phasing of the development.

ESTABLISHMENT MAINTENANCE PLAN (YEARS 1-5)

Tree Planting Areas: Regular visits (Years 1-5) required to maintain all newly planted stock in a weed free condition. A 1m diameter ring around each individual plant is to be maintained in a weed free condition using a combination of repeated applications of an approved translocated systemic herbicide during the growing season followed by an approved residual herbicide application during late winter/early spring.

Planting generally: Any plants affected by frost heave or wind rock shall be re-firmed. Protective fencing, stakes, ties and tree guards are to be checked at each visit and adjusted, repaired or replaced as necessary. Other maintenance will include watering, pest and disease control as necessary to maintain healthy growth.

Replacement Planting: Any tree/shrub losses to be replaced in accordance with original planting schedule & specification.

Low Maintenance Grassland: Grass mowing to be carried out at 4 week intervals during growing season. All grass edges adjoining hard surfaces and structures shall be kept trimmed to maintain a tidy appearance (minimum 2 visits per annum).

Wildflower Grassland: 3 cuts during Year 1 (March, May, September) to establish sward. Thereafter to be topped annually in autumn (September-November) to a height of 150-200mm. A second cut may be required in spring (March-April). Pernicious weeds to be controlled by hand pulling, topping or spot treating with approved herbicides.

Use of Herbicides: Several alternative herbicides may be suitable and any which is used must be listed in the current British Crop Protection Council UK Pesticide Guide. The use of herbicides is governed by the Control of Pesticides Regulations 1986 and all herbicides are to be strictly applied in accordance with manufacturer's recommendations. All operatives must hold a current recognised User Certificate of Competence. Any damage to existing trees or newly planted stock shall be made good at Contractor's own expense.

LONG TERM LANDSCAPE MANAGEMENT PLAN (YEARS 6-20)

Woodland Planting Areas

The main objective for the new woodland planting is to develop effective screening to the proposed development as well as making an appropriate contribution to local landscape character and biodiversity.

The intention is to manage the main woodland mix in the longer term to favour Oak as the climax species. Management responsibilities will rest with the landowners and their appointed contractors.

Once the new woodland planting has begun to provide effective shelter and screening, positive management can be carried out to encourage structural diversity and assist the conservation value of the woodland. Selective coppicing of the quicker growing species such as Aspen and Wild Cherry, can be carried out to create space for the Oak to develop. Some coppiced timber can be left in situ as this will add to the wildlife value of the woodland.

The first full thinning would be undertaken after 15-20 years. Again the emphasis would be on the thinning of the quicker growing Aspen and Cherry and other secondary species to favour the longer term Oak whilst still maintaining a diverse mix of secondary species for wildlife value.

PLANTING SCHEDULE

Native Tree Belt Planting

Code	Percentage	Species	Size	Spacing	Grouping
W1	10	Acer campestre (Field Maple)	600-800mm/1+1	2.0 m centres	5-10
	20	Populus tremula (Aspen)	800-1000mm/1+1	2.0 m centres	5-10
	10	Prunus avium (Wild Cherry)	600-800mm/1+1	2.0 m centres	5-10
	25	Quercus petraea (Sessile Oak)	600-800mm/1+1	2.0 m centres	5-10
	25	Quercus robur (Oak)	600-800mm/1+1	2.0 m centres	5-10
	5	Corylus avellana (Hazel)	400-600mm/1+1	2.0 m centres	5-10
	5	Crataegus monogyna (Hawthorn)	400-600mm/1+1	2.0 m centres	5-10
W2	25	Corylus avellana (Hazel)	400-600mm/1+1	1.5 m centres	3-5
	25	Crataegus monogyna (Hawthorn)	400-600mm/1+1	1.5 m centres	3-5
	25	Prunus spinosa (Blackthorn)	400-600mm/1+1	1.5 m centres	3-5
	25	Salix caprea (Goat Willow)	600-800mm/0/1	1.5 m centres	3-5

Hedge Mixes

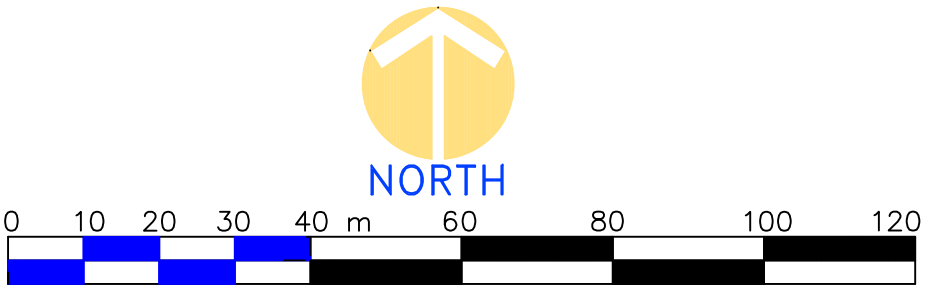
Code	Species	Percentage	Size	Spacing	Grouping
H1	Crataegus monogyna (Hawthorn)	50	400-600mm/1+1	5/lin m	Row 1: 100%. Row 2: Infill
	Corylus avellana (Hazel)	35	400-600mm/1+1	5/lin m	Row 2: 5 - 10
	Acer campestre (Field Maple)	5	400-600mm/1+1	5/lin m	Row 2: 3 - 5
	Cornus sanguinea (Dogwood)	5	400-600mm/1+1	5/lin m	Row 2: 3 - 5
	Viburnum opulus (Guelder Rose)	5	400-600mm/1+1	5/lin m	Row 2: 3 - 5
H2	Carpinus betulus (Hornbeam)	100	400-600mm/1+1	5/lin m	

Individual Trees

Code	Species	Description	Height
T1	Acer campestre (Field Maple)	Standard (Rootballed)	2500-3000mm
T2	Alnus glutinosa (Alder)	Standard (Rootballed)	2500-3000mm
T3	Sorbus aucuparia (Rowan)	Standard (Rootballed)	2500-3000mm
T4	Sorbus aria (Whitebeam)	Standard (Rootballed)	2500-3000mm

Seed Mixes

Code	Supplier	Mix	Location	Sowing Rate
A4	Germinal	A4 (Low Maintenance)	General	35g/m ²
WFG4	Germinal	WFG4 (Neutral Soils)	Swale banks/service corridor	5g/m ²
WFG9	Germinal	WFG9 (Wetland & Pond Areas)	Swale bottom	5g/m ²



Rev A: Amendment to access point (28/09/16).

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Description Tomlinsons Daines Five Crosses Industrial Estate Minera, Wrexham	Drawing Name Soft Landscape Proposals
Drawn by AM	Dwg number 1473_04
	Rev A
Scale(s) 1:1000 @ A1 size	Date 28/09/16