

Species	Phase	Common Name	% Size (cm)	Pot/Bare-Root	3, 5 & 6							
					1	2	4B	4C	7A	7B	7C	
Woodland Planting Mix					48100m²	17408m²	12956m²	766m²	6289m²	7097m²	908m²	0m²
Acer campestre	field maple	10	40-60	B-R	534	193	144	9	70	79	10	
Betula pendula	birch	10	40-60	1L	534	193	144	9	70	79	10	
Corylus avellana	hazel	10	40-60	B-R	534	193	144	9	70	79	10	
Malus sylvestris	crab apple	5	60-80	B-R	267	97	72	4	35	39	5	
Quercus robur	English oak	40	60-80	B-R	2138	774	578	34	280	315	40	
Rhamnus cathartica	purging buckthorn	5	40-60	B-R	267	97	72	4	35	39	5	
Sorbus torminalis	wild service tree	5	60-80	B-R	267	97	72	4	35	39	5	
Tilia cordata	small leaved lime	10	40-60	B-R	534	193	144	9	70	79	10	
Viburnum lantana	wayfaring tree	5	60-80	B-R	267	97	72	4	35	39	5	
Shrub/Scrub Planting Mix					7700m²	1627m²	5092m²	1958m²	9628m²	0m²	4608m²	164m²
Betula pubescens	downy birch	10	40-60	B-R	86	18	57	22	74		51	2
Crataegus monogyna	hawthorn	40	40-60	B-R	342	72	228	87	295		205	7
Corylus avellana	hazel	10	40-60	B-R	86	18	57	22	74		51	2
Malus sylvestris	crab apple	10	60-80	B-R	86	18	57	22	74		51	2
Rosa arvensis	field rose	10	60-80	B-R	86	18	57	22	74		51	2
Rhamnus cathartica	purging buckthorn	10	40-60	B-R	86	18	57	22	74		51	2
Viburnum lantana	wild service tree	10	60-80	B-R	86	18	57	22	74		51	2
Open Shrub/Scrub Planting Mix					1200m²	0m²	0m²	14201m²	3953m²	0m²	0m²	0m²
Betula pubescens	downy birch	10	40-60	B-R	4			45	13			
Crataegus monogyna	hawthorn	40	40-60	B-R	15			178	50			
Corylus avellana	hazel	10	40-60	B-R	4			45	13			
Malus sylvestris	crab apple	10	60-80	B-R	4			45	13			
Rosa arvensis	field rose	10	60-80	B-R	4			45	13			
Rhamnus cathartica	purging buckthorn	10	40-60	B-R	4			45	13			
Viburnum lantana	wild service tree	10	60-80	B-R	4			45	13			
Hedgerow Planting Mix					0m	0m	0m	0m	0m	0m	118m	45m
Crataegus monogyna	hawthorn	70	40-60	B-R							405	156
Corylus avellana	hazel	10	40-60	B-R							58	22
Comus sanguinea ssp. sanguinea	dogwood	5	40-60	B-R							29	11
Rosa arvensis	field rose	10	60-80	B-R							58	22
Rhamnus cathartica	purging buckthorn	5	40-60	B-R							29	11

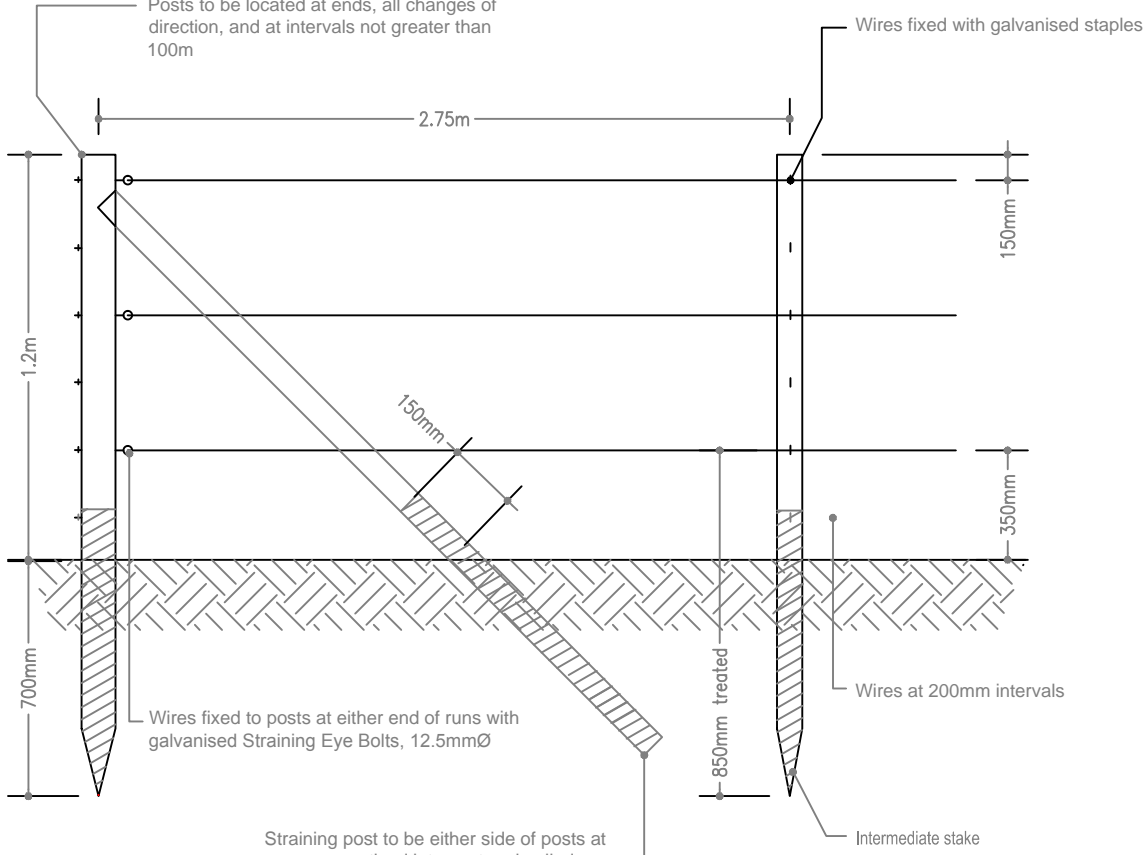
Phase	3, 5 & 6	1	2	4B	4C	7A	7B	7C
Calcareous Grassland	30600m²	18611m²	5455m²	12063m²	16288m²	16180m²	11675m²	18805m²
Open Calcareous Grassland	100m²	0m²	2346m²	0m²	1177m²	0m²	0m²	256m²

Aquatic Planting

Pond Zone	Latin name	Common name	Root Condition	Size	% Mix	No
open level	<i>Lychnis flox-cucull</i>	Ragged robin	RT	110cc	35	115
	<i>Juncus effusus</i>	Soft rush	RT	110cc	30	100
shallow margins	<i>Filipendula ulmaria</i>	Meadowweet	RT	110cc	35	115
	<i>Caltha palustris</i>	Kingcup/Marsh marigold	RT	110cc	20	200
	<i>Lythrum salicaria</i>	Purple loosestrife	RT	110cc	15	100
	<i>Veronica beccabunga</i>	Brooklime	RT	110cc	15	100
	<i>Menyanthes aquatica</i>	Water violet	RT	110cc	15	100
shallow aquatic zone	<i>Isis pseudacorus</i>	Yellow flag iris	RT	110cc	15	100
	<i>Alisma plantago-aquatica</i>	Water plantain	RT	110cc	20	200
	<i>Myosotis scorpioides/Palustris</i>	Water (True) forget-me-not	RT	110cc	25	210
	<i>Hesperis matronalis</i>	Common night-flowering cerise	RT	110cc	25	210
	<i>Sagittaria sagittifolia</i>	Arrowhead	RT	110cc	25	210
deep water zone	<i>Ranunculus aquatilis</i>	Water-crowfoot	RT	110cc	25	210
	<i>Callitriche stagnalis</i>	Common water-stargwort	RT	110cc	50	75
	<i>Potamogeton natans</i>	Broad leaved pondweed	RT	110cc	50	75

Calcareous Grassland Seed Mix

EM6: Meadow Mixture for Chalk and Limestone Soils			
Herbs			
%	Latin name	Common name	
0.5	<i>Achillea millefolium</i>	Yarrow	
1.5	<i>Anthriscus vulgaris</i>	Kidney vetch	
1	<i>Centaurea nigra</i>	Common knapweed	
1	<i>Centaurea scabiosa</i>	Greater knapweed	
0.5	<i>Clinopodium vulgare</i>	Wild basil	
1	<i>Daucus carota</i>	Wild carrot	
0.5	<i>Filipendula vulgaris</i>	Dropwort	
1	<i>Galium verum</i>	Lady's bedstraw	
1.5	<i>Knaulia arvensis</i>	Field scabious	
0.5	<i>Leontodon hispidus</i>	Rough hawkbit	
1	<i>Leucanthemum vulgare</i>	Oxeye daisy	
2	<i>Lotus corniculatus</i>	Birdfoot trefoil	
0.5	<i>Origanum vulgare</i>	Wild marjoram	
0.5	<i>Pimpinella saxifraga</i>	Burnet saxifrage	
1	<i>Plantago media</i>	Hoary plantain	
1	<i>Prunella veris</i>	Cowslip	
1	<i>Prunella vulgaris</i>	Selfheal	
1	<i>Ranunculus acris</i>	Meadow buttercup	
0.5	<i>Reseda lutea</i>	Wild mignonette	
2	<i>Sanguisorba minor (Potentilla sanguisorba)</i>	Salad burnet	
0.5	<i>Scabiosa columbaria</i>	Small scabious	
Grasses			
%	Latin name	Common name	
1	<i>Briza media</i>	Ox-eye grass (w)	
32	<i>Cynosurus cristatus</i>	Crested dogstail	
22	<i>Festuca ovina</i>	Sheep's fescue	
16	<i>Festuca rubra</i>	Slender-creeping red-fescue	
1	<i>Koeleria macrantha</i>	Crested hair-grass (w)	
5	<i>Phleum bertolonii</i>	Smaller cat's-tail	
3	<i>Trisetum flavescens</i>	Yellow oat-grass (w)	
80			



- NOTES
- All timber is to be sweet chestnut or larch, peeled.
 - Straining posts are to be 75mm diameter, approx 1.5m long, and treated with an approved timber preservative to 150mm above ground level.
 - Wires are to be fixed by means of galvanised Straining Eye Bolts through posts at beginnings and ends of runs, and by being fixed to intermediate stakes with galvanised staples.
 - Tree protection fence to be located 2m from the limit of extraction boundary where space allows.

TREE PROTECTION AND POST AND WIRE FENCING
Not to Scale

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Grass seeding
All grass seeding to be undertaken during spring or autumn and to be sown at 20g/m2 and firmed in by rolling. Areas to receive tree and shrub planting will be sown with the calcareous grassland mix prior to planting.
Open calcareous grassland to be seeded to 70% of the total area with un-seeded areas not to exceed 5m2.
All seeds shall be of British Provenance and are to include provenance certification where applicable to proprietary mixes.
Seeding will occur either in the first Spring (mid April/mid May) or first autumn (mid August/mid September) following placement of the soils.

- In advance of undertaking the seeding all areas to be seeded will:
- be sampled for soil analysis of pH and nutrient status, not more than one month before seeding, in accordance with Appendix 3 "Sampling for Soil pH, P, K and Mg" of Fertiliser Manual RB209 (2010) published by Defra in order to establish that the substrate is suitable for the wildflower mix;
 - be sprayed with translocated herbicide (glyphosate or similar) 14 days before cultivation if weed growth has established between the placement of the soils and the period of seeding;
 - be cultivated to a depth of 100mm by disc/harrow to produce a fine till free of stones larger than will pass through a 75mm mesh sieve;
 - no fertiliser will be applied to the planting areas in order to limit fertility as a means of promoting the wildflower sward and reducing grass growth competition with the trees/shrubs.

Proposed Trees and Shrubs
Native shrub and tree mixes to be notched planted at 3m centres in same species groups of 5 - 9 with a random distribution of species in a random configuration avoiding straight lines and regular geometric patterns.
Open shrub mix to be notched planted at 4m centres, over 50% of the area, in same species groups of 5 - 9 with a random distribution of species in a random configuration avoiding straight lines and regular geometric patterns.
Hedge mix to be notched planted at 350mm centres in a double staggered row 350mm apart. All trees and shrubs to be fitted with 600 mm high Tubex standard tree protector supported by an appropriate wooden stake and fitted as per manufacturers recommendations.
Planting will be undertaken in the period November to March into areas previously seeded with a calcareous grassland seed mix.
A 50 cm diameter weed free area shall be maintained around each planted tree.

Existing Shrub and Trees to Western Face
Additional planting to area of existing shrubs and trees to be undertaken where sufficient gaps are present.

Aquatic Planting
The pond planting will use plant materials gained from site (Pond 7 clearance) where possible with off site supplementation where necessary.
Plants to be planted at a rate of 6/m2 spread in groups over 30% of the overall pond area. Plants to be grouped in 3-9 of each species.

Planting Notes
The handling of plants to be in accordance with National Plant Specification 'Handling and Establishing Landscape Plants'.

All plants and planting operations are 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: 2007 Specification for topsoil and requirements for use (incorporating Corrigendum No.1)
- BS 4428:1989. Code of practice for general landscape operations (excluding hard surfaces) (AMD 6784)
- BS 5837: 2012 Trees in relation to construction - Recommendations (AMD Corrigendum 15988)
- BS 7370-3:1991. Grounds maintenance. Recommendations for maintenance of amenity and functional turf (other than sports turf)

Maintenance
Management operations during the 10 year aftercare period would include:

- monitoring establishment of the grass/wildflower sward
- mowing/trimming of the vegetation between the plants in May and August as required
- spot weeding of unwanted ruderal weeds or noxious weeds;
- maintenance of tree guards or other forms of protection until trees are established;
- fertiliser application to the base of plants as required to ensure continued growth;
- maintenance of any stakes and ties;
- removal of guards, stakes and ties at appropriate times;
- carry out replacement planting in the event that losses of greater than 10% of the original planting occur.
- grazing or mowing of the calcareous grassland sward in spring/late summer. (April/May and August/Sept)

Losses of less than 10% of the total numbers of plants will introduce an element of randomness and habitat variation within the planting areas, particularly the scrub, which is desirable.

Note: Phases as shown on figure TLS1

<p>This drawing is for preliminary purposes only and is subject to amendment during design development. UNDER NO CIRCUMSTANCES MUST THIS DRAWING BE USED FOR CONSTRUCTION PURPOSES.</p>	NOTES			<p>Purpose of issue</p> <p>PLANNING</p>	<p>Project Title</p> <p>THORNTAUGH LANDFILL / COOK'S HOLE QUARRY</p>	<p>Drawing Title</p> <p>PROPOSED DEVELOPMENT THORNTAUGH LANDFILL SITE ENVIRONMENTAL STATEMENT PHASED RESTORATION SCHEME</p>	<p>Designed RC</p> <p>Drawn RC</p> <p>Checked NW</p> <p>Approved Approved by</p> <p>Date Approved Date</p>	<p>Scale @ A1</p> <p>1:2500</p>	<p>Zone / Mileage</p> <p>Zone / Mileage</p>	<p>AEOM</p> <p>Royal Court, Basil Close, Chesterfield, Derbyshire S41 7SL</p> <p>Telephone: (01246) 209221 Fax: (01246) 209229</p> <p>www.aecom.com</p>	<p>Drawing Number</p> <p>TLS6</p>	<p>Rev</p>
	<p>Revision Details</p>	<p>By</p>	<p>Date</p>									

Project: 2014/11/13
 File Name: LCH2 (SITE) MANAGEMENT/2014/2014 THORNTAUGH ENGINEERING/2014/2014 TECHNICAL DRAWINGS/FIGURE TLS6/FIGURE TLS6 - CORRECT AREAS