

### Habitat Creation

Areas of broadleaf woodland to be established at the southwestern boundary will enhance the existing groups of trees and scrub. Species of oak and ash to form the dominant high canopy woodland with field maple and wild cherry forming the sub-dominant trees. The shrub layer will consist of hazel, hawthorn, blackthorn, dogwood, honeysuckle and bramble.

Low woodland edge mixes of wild privet, guelder rose, dog-rose, field rose, spindle and holly will provide structural diversity alongside the core woodland areas.

Trees and shrubs to be notch planted as bare root transplants at one meter centers. Standard bare root trees to be pit planted into prepared ground backfilled with a topsoil and compost mixture. Trees to be supported with stake and ties.

Hawthorn, hazel, blackthorn and goat willow to be planted in groups within the open space areas to form a matrix of thickets and copses. Honeysuckle, bramble and ivy to be planted as groundcover alongside.

It will be important to establish shallow shelves and margins around the restored lake to allow marginal and submerged plants to colonize by the water. Ideally the shelves should extend 5-10 meters from the waters edge at a depth of 30-70 centimeters.

Mixed native hedge:  
15 linear meters  
(Mix F)

Woodland edge  
(Mix B)

Existing group of trees and scrub  
(To be retained and protected)

### Plant schedules

#### Core woodland (Mix A) Oak and Ash- High canopy woodland

##### Trees

Plant in groups of 2-4 of same species at 1 meter centers

Species	Proportion (%)	Type/ Root	Height (cm)	Density/ m. ctr
Quercus robur	7.5	Whip/ Br	80-100	1
Fraxinus excelsior	2.5	Whip/ Br	80-100	1
Acer campestre	10	Whip/ Br	80-100	1
Prunus avium	10	Whip/ Br	80-100	1

##### Shrubs

Species	Proportion (%)	Type/ Root	Height (cm)	Density/ m. ctr
Corylus avellana	20	Transplant/ Br	60-80	1
Crataegus monogyna	20	Transplant/ Br	60-80	1
Prunus spinosa	15	Transplant/ Br	60-80	1
Cornus sanguinea	10	Transplant/ Br	60-80	1
Lonicera periclymenum	2.5	Transplant/ Br	40-60	1
Rubus fruticosus	2.5	Transplant/ Br	40-60	1

#### Low woodland edge (Mix B)

##### Shrubs

Species	Proportion (%)	Type/ Root	Height (cm)	Density/ m. ctr
Viburnum opulus	30	Transplant/ Br	60-80	1
Ligustrum vulgare	30	Transplant/ Br	40-60	1
Rosa canina	15	Transplant/ Br	60-80	1
Rosa arvensis	15	Transplant/ Br	40-60	1
Euonymus europaeus	5	Transplant/ Br	40-60	1
Ilex aquifolium	5	Transplant/ Br	40-60	1

#### Thickets and copses (Mix C)

##### Shrubs

Planted in groups of 2-4 of same species at 1 meter centers

Species	Proportion (%)	Type/ Root	Height (cm)
Salix caprea	30	Transplant/ Br	60-80
Corylus avellana	30	Transplant/ Br	60-80
Crataegus monogyna	30	Transplant/ Br	60-80
Prunus spinosa	5	Transplant/ Br	60-80
Rosa canina	5	Transplant/ Br	60-80

#### Low ground cover (Mix D)

##### Shrubs

Planted in groups of 2-4 of same species at 1 meter centers

Species	Proportion (%)	Type/ Root	Height (cm)
Lonicera periclymenum	40	Transplant/ Br	60-80
Rubus fruticosus	30	Transplant/ Br	60-80
Hedera helix	30	Transplant/ Br	60-80

#### Reed beds/ submerged planting (Pond margin. E)

Species	Size (cm)	Type	Density/ m2
Phragmites australis	10-20	2 L	5

To include the following submerged native plants  
Spiked water- milfoil (*Myriophyllum spicatum*)  
Curled pondweed (*Potamogeton crispus*)  
Common spike rush (*Eleocharis palustris*)  
Water crowfoot (*Ranunculus aquatilis*)

#### Mixed native hedge (Mix F)

Transplants to be planted in a double staggered row at 300 mm centers (5 native species to form the hedgerow)

Species	Proportion (%)	Type/ Root	Height (cm)
Crataegus monogyna	50	Transplant/ Br	60-80
Prunus spinosa	15	Transplant/ Br	60-80
Corylus avellana	15	Transplant/ Br	60-80
Euonymus europaeus	15	Transplant/ Br	60-80
Cornus sanguinea	5	Transplant/ Br	60-80

#### Meadow grass (Mix G)

Use BFS10 Species rich Wildflower Meadow Seed Mix from British Flora.  
This wildflower meadow mixture contains over 20 different varieties of grasses and wildflowers and is suitable for all soil types creating a varied habitat for insects and birds.

Contains: Wildflowers 20% (20 species) Grasses 80 % (5 species).

#### Specimen trees

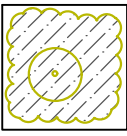
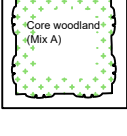
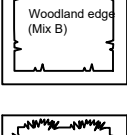
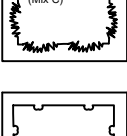
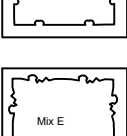
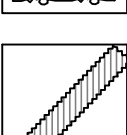
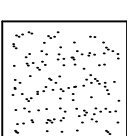
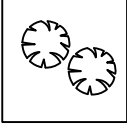
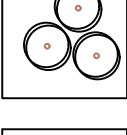


Species	Size (cm)	Type
Alnus glutinosa	Std	Br
Betula pendula	Std	Br
Prunus avium	Std	Bt
Fagus sylvatica	Std	Br
Populus tremula	Std	Br
Quercus robur	Std	Br
Salix caprea	Std	Br
Sorbus aucuparia	Std	Br

#### Total areas for each habitat (For the BNG calculation)

Proposed habitat type	Total area or nr of proposed new habitat
Oak and ash broadleaf woodland. (A)	2853 m2
Low woodland edge shrub mix. (B)	1960 m2
Thickets and copses/ scrub (C)	653 m2
Groundcover shrub planting (D)	410 m2
Reed/ submerged planting (E)	1386 m2
Standard trees planted within the meadow grass	68 nr
Standard trees to be planted within woodland	18 nr
Meadow grass (Species rich wildflower meadow) (G)	14,777 m2
Water to pond	4429 m2
Mixed native hedgerow (F)	15 linear meters

Total site area (excluding hardstand to site entrance) is: 26,434 m2  
Total area of proposed new habitat (Including waterbody) is: 26,468 m2

### LEGEND

-  Existing vegetation to be retained and protected
-  Proposed oak and ash woodland core mix (Mix A)
-  Proposed low woodland edge mix (Mix B)
-  Proposed thickets and copses (Mix C)
-  Proposed low growing shrubs (Mix D)
-  Proposed reed beds and submerged plants to water margin (Mix E)
-  Proposed mixed native hedge (Mix F)
-  Proposed species rich wildflower meadow (Mix G)
-  Proposed specimen water side trees (Poplar and willow species)
-  Proposed scattered standard trees (Within the open meadow areas)
-  Proposed specimen light standard trees (Within the woodland areas)

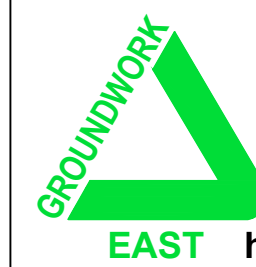
Existing vegetation to be retained is to be protected with tree protection fencing in accordance with BS 5837 'Trees in relation to design demolition and construction-Recommendations.'

### REVISION NOTES

- Rev A: addition of meadow grass to entrance drive  
Habitat area calculations updated  
Width of waterside plants increased to min 5 m.  
Adjusted key to marginal plants to 'reed beds' Aug 23 GJD
- Rev. B: Tree species changed to native species, addition of 15 linear meters of native hedge, addition of 15 standard trees to open meadow areas, addition of submerged plants to water margin, specified grass seed mixture. Aug 23 GJD

### NOTES

#### MEASUREMENTS IN METRES UNLESS OTHERWISE STATED



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CLIENT	Land Logical
PROJECT ADDRESS	Russell Green Quarry, Chelmsford
PROJECT TITLE	Russell Green Quarry
DRAWING NAME	Detail Planting Plan
DRAWING NUMBER	70071_002_001 (Rev B)
DATE	August 23
SCALE	1:500 @ A1
DRAWN BY	GJD
CHECKED	MM
REVISION	B