



TELSTAR LIMITED

**Coldharbour Farm,
Emsworth, Hampshire**

Landscape & Ecological Design Strategy & Outline Plant Specification

Approved By: Joe Jackson
Signed:
Position: Principle
Date: 25th February 2014

February 2014 – Planning Issue

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1.0 Introduction

- 1.1 The development site is edged by the A27 to the south; Emsworth Park and Coldharbour Farm Road residential development to the east; A27 Services to the west and agricultural land to the north. The site covers an area of approximately 1.9 hectares and consists of grassland and a drainage ditch which is edged with mature shrub and trees. The site is bordered by mature broadleaf trees, shrub and hedgelines. There is a ditch adjacent to the eastern boundary which is designated by the local planning authority as a *Site of Importance for Nature Conservation (SINC)* and is to be retained and protected within the development proposals.
- 1.2 The site is to be re-developed with 53 no. residential dwellings, private gardens, communal garden areas, car parking areas and an infiltration basin. The development proposals would be accessed from Coldharbour Farm Road to the south eastern corner of the site.
- 1.3 A detailed landscape scheme package would be prepared following approval of the outline planning application. The detailed scheme would identify planting areas, specific specimen planting locations, quantities and densities. The detailed landscape package would discharge planning conditions as part of a reserved matters application.

2.0 Existing Trees and Vegetation

- 2.1 The existing trees within and surrounding the development site comprise mature specimens of;
- *Betula pubescens* (Downy birch);
 - *Taxus baccata* (Common yew);
 - *Fraxinus excelsior* (Common Ash);
 - *Aesculus hippocastanum* (Horse chestnut);
 - *Quercus robur* (Common Oak);
 - *Quercus pubescens* (Downy Oak);
 - *Platanus hispanica* (London plane);
 - *Acer platanoides* (Norway Maple);
 - *Acer pseudoplatanus* (Common Sycamore);
 - *Tilia* sp. (Lime sp.).
- To the base of the trees there are boundary hedgelines and shrub/scrub comprising;
- *Sambucus nigra* (Common elder);
 - *Corylus avellana* (Hazel);
 - *Crataegus monogyna* (Common Hawthorn);
 - *Hedera helix* (Common Ivy);
 - *Rosa* sp. (Rose sp.);
 - *Cornus sanguinea* (Common Dogwood);
 - *Rubus fruticosus* (Bramble).
- 2.2 The existing trees and shrub within the development site and edging the drainage ditch will require removal in order to accommodate the development proposals. The mature boundary vegetation surrounding the development site is proposed to be retained and protected within the development proposals in accordance with BS5837; 2012 – ‘*Trees in Relation to Design, Demolition and Construction – Recommendations*’, and enhanced and reinforced with further native tree, hedge and understorey shrub planting. The existing drainage ditch located adjacent to the eastern boundary is proposed to be retained within the development proposals and protected with native tree and understorey shrub buffer planting.

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3.0 Ecological Summary

- 3.1 The preliminary ecological appraisal was conducted on the 19th of August 2013, by Ben Mitchell (BSc) on behalf of Ecosulis Ltd. The report contains the following ecological recommendations;
- *Ditches should be retained within the scheme where possible and protected with a buffer;*
 - *Hedgerows and trees should be retained. Where this is not possible they should be replaced with native planting;*
 - *Consideration should be given to enhancing the site for badger with appropriate lighting and planting scheme;*
 - *Linear features such as hedgerows and woodland corridors should be retained on site. Where this is not possible new linear vegetation should be planted to enhance the foraging opportunities for bats on site;*
 - *The site should be enhanced for bats including the use of bat roosting tubes and planting of night-scented species such as honeysuckle;*
 - *Consideration should be given to reptiles, invertebrates and small mammals on site through appropriate planting, management scheme and the creation of deadwood piles;*
 - *Enhancement of the site for birds should include native planting and provision of nest boxes.*

4.0 Landscape and Ecological Design Strategy

- 4.1 The soil at Coldharbour Farm, Emsworth is defined by Cranfield University National Soil Resource Institute as being '*Loamy soils with naturally high water*'. The proposed tree, hedge, shrub and grass species have been selected to suit the soil conditions on site and to reflect the species present locally.
- 4.2 The landscape strategy for the Coldharbour Farm development site would include the planting of native avenue trees to the vehicular access roads and western edge of the infiltration basin. The infiltration basin would be seeded with species-rich wildflower grassland suitable for wetland areas, planted with marginal shrub species to the edge of the depression, and mixed-species native understorey shrubs to the outer edge of the basin. Native trees would be planted to the eastern edge of the infiltration basin, parallel to the eastern boundary, and would provide a protective native buffer to the adjacent ditch. The tree and shrub planting would provide habitat connectivity to the development boundaries and foraging opportunities for bats.
- 4.3 The vehicular and pedestrian access paths would be planted with native and ornamental tree species, under planted with ornamental hedging and flowering shrub and herbaceous planting. The proposed tree planting would provide vertical interest and soften views of the proposed residential buildings from within the site and from the surrounding areas. The flowering shrub and ornamental hedge planting would delineate the car parking and residential garden areas, and provide seasonal colour and interest.
- 4.4 The residential building edges are to be planted with flowering shrub and herbaceous planting which would soften the building elevations and highlight the entrance areas. Native tree planting would be proposed to the rear garden areas and site boundaries, reinforcing the existing boundary vegetation, providing habitat connectivity, and softening views to and from the proposed development. Sections of the western and northern site boundaries would also be strengthened with the planting of native hedge and understory shrub planting.

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- 4.5 The residential buildings to the south of the development site would share a communal garden area which would be edged with native hedge, native tree and ornamental tree planting to provide privacy and define the space. The trees and hedge would be underplanted with areas of flowering shrub and herbaceous planting to provide seasonal colour and interest. The communal garden area would extend to the south of the residential buildings, parallel to the southern boundary, and would comprise a timber pergola walkway providing access to a central patio area. Ornamental tree planting and a circular tree seat would be proposed to the centre of the patio area, providing external seating and a focal feature. Flowering Climbers would be planted to the base of the timber pergola and the patio area would be edged with flowering shrub and herbaceous planting, ornamental and native tree planting, and species-rich wildflower grassland areas which would provide habitat interest for birds and attract invertebrates to the site. A grass path would be cut through the eastern section of the wildflower grassland, providing access to the proposed cycle path and footpath which runs west - east through the site.
- 4.6 The proposed planting would enhance the surrounding mature vegetation, provide a mosaic of habitats, foraging opportunities for bats and birds, and increase the bird nesting capacity of the development site. Furthermore, roosting tubes / bricks for bats and nest boxes for birds would be applied to the proposed residential buildings, and deadwood piles would be created within the proposed species-rich wildflower grassland areas.
- 4.7 A detailed landscape scheme package would be prepared following approval of the outline planning application, which would include the species listed within the following report, and would identify planting areas, specific specimen planting locations, quantities and densities. The detailed landscape package would discharge planning conditions as part of a reserved matters application, and would comprise the following;
- Soft landscape layout drawing;
 - Detailed planting plans;
 - Detailed Plant Schedule and Plant Specification.

Native Tree Planting				
Name	Size	Pot	Density	Number
<i>Acer campestre</i> (Field Maple)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Acer platanoides</i> (Norway Maple)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Betula pendula</i> (Silver Birch)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Carpinus betulus</i> (Common Hornbeam)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Fagus sylvatica</i> (Common Beech)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--

RB; Root Ball;

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Native Tree Planting Continued

<i>Quercus robur</i> (Common Oak)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Tilia x europaea</i> (Common Lime)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--

Ornamental Tree Planting

Name	Size	Pot	Density	Number
<i>Acer campestre</i> 'Elsrijk' (Field Maple)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Acer rubrum</i> 'October Glory' (Red Maple)	14 – 16 cm Girth Size; 4.0 – 4.5 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Carpinus betulus</i> 'Fastigiata' (Fastigate Hornbeam)	14 – 16 cm Girth Size; 4.25 – 6.0 m height; Standard Extra Heavy Stock.	RB	Specimen	--
<i>Sorbus aria</i> 'Lutescens' (Whitebeam)	14 – 16 cm Girth Size; 4.25 – 6.0 m height; Standard Extra Heavy Stock.	RB	Specimen	--

RB; Root Ball;

Native Hedge Planting

Name	Size	Pot	Density	Number
<i>Carpinus betulus</i> (Common Hornbeam)	60 – 90 cm height. Multi-Branched. (Hedging - 2 no. and 3 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--
<i>Cornus sanguinea</i> (Dogwood)	60 – 90 cm height. Multi-Branched. (Hedging - 2 no. and 3 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--
<i>Corylus avellana</i> (Hazel)	60 – 90 cm height. Multi-Branched. (Hedging - 2 no. and 3 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--
<i>Crataegus monogyna</i> (Common Hawthorn)	60 – 90 cm height. Multi-Branched. (Hedging - 2 no. and 3 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--
<i>Rosa canina</i> (Dog Rose)	40 – 60 cm height; Transplant. (Hedging - 2 no. and 3 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--

(Planted in random groups of between 3 – 5 no. plants in staggered rows)

BR – Bare Root Stock;

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Native Understory Shrub Planting				
Name	Size	Pot	Density	Number
<i>Acer campestre</i> (Field Maple)	60 – 90 cm height. Multi-Branched.	BR	1 / m ²	--
<i>Cornus alba</i> (Common Dogwood)	60 – 90 cm height. Multi-Branched.	BR	1 / m ²	--
<i>Corylus avellana</i> (Common Hazel)	60 – 90 cm height Transplant.	BR	1 / m ²	--
<i>Crataegus monogyna</i> (Common Hawthorn)	60 – 90 cm height; Transplant.	BR	1 / m ²	--
<i>Hedera helix</i> (Common Ivy)	60 – 80 cm spread.	3 ltr CG	4 / m2	--
<i>Lonicera periclymenum</i> (Honeysuckle)	60 – 80 cm spread.	3 ltr CG	1 / m2	--
<i>Rosa canina</i> (Dog Rose)	40 – 60 cm height; Transplant.	BR	1 / m2	--
<i>Salix cinerea</i> (Grey Willow)	60 – 90 cm height Transplant.	BR	1 / m2	--
<i>Viburnum lantana</i> (Wayfaring Tree)	60 – 90 cm height Transplant.	BR	1 / m2	--
<i>Viburnum opulus</i> (Guelder Rose)	40 – 60 cm height. Transplant.	BR	1 / m2	--
Native Understory Planting; 60 – 90 cm height; Multi-Branched; Staggered rows set at 1000 mm centres; Planted in random groups of 3 -5 plants.				

Ornamental Hedge Planting				
Name	Size	Pot	Density	Number
<i>Fagus sylvatica</i> 'Purpurea' (Copper Beech)	60 – 90 cm height. Multi-Branched. (Hedging - 2 no. staggered rows set 400 mm apart @400 centres.)	BR	400 mm centres	--
Ornamental hedge planting to be 2 no. staggered rows set 400 mm apart @ 400 mm centres				

BR – Bare Root Stock;
CG – Container Grown Stock;

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Shrub Planting				
Name	Size	Pot	Density	Number
<i>Amelanchier lamarckii</i>	120 – 150 cm height. Multi-Branched.	15 ltr CG	Specimen	--
<i>Carex morrowii</i> 'Variegata'	30 – 40 cm spread	3 ltr CG	Specimen	--
<i>Carex</i> 'Silver Sceptre'	30 – 40 cm spread	3 ltr CG	Specimen	--
<i>Caryopteris x clandonensis</i> 'Heavenly Blue'	30 – 40 cm spread	3 ltr CG	Specimen	--
<i>Ceanothus thyrsiflorus</i> <i>repens</i>	40 – 60 cm height.	7 ltr CG	3 / m2	--
<i>Cistus x corbariensis</i>	40 – 60 cm height.	7 ltr CG	3 / m2	--
<i>Cistus x purpureus</i>	30 – 40 cm height.	7 ltr CG	3 / m2	--
<i>Cornus alternifolia</i> 'Argentea'	125 – 150 cm height. Multi-Branched.	15 ltr CG	Specimen	--
<i>Cornus mas</i>	125 – 150 cm height. Multi-Branched.	15 ltr CG	Specimen	--
<i>Cornus sanguinea</i> 'Mid-Winter Fire'	60 – 90 cm height. Multi-Branched.	15 ltr CG	Specimen	--
<i>Euonymus fortunei</i> 'Silver Queen'	20 – 30 cm spread.	7 ltr CG	4 / m2	--
<i>Fatsia japonica</i>	60 – 90 cm height. Multi-Branched.	15 ltr CG	Specimen	--
<i>Hebe albicans</i> 'Red Edge'	40 – 60 cm height.	7 ltr CG	Specimen	--
<i>Hebe x franciscana</i> 'Blue Gem'	40 – 60 cm height.	7 ltr CG	Specimen	--
<i>Jasminum nudiflorum</i>	30 – 40 cm height.	7 ltr CG	3 / m2	--
<i>Lysimachia nummularia</i> 'Aurea'	30 – 40 cm spread.	3 ltr CG	5 / m2	--
<i>Lavandula angustifolia</i> 'Munstead'	30 – 40 cm spread.	7 ltr CG	4 / m2	--
<i>Miscanthus sinensis</i> 'Flamingo'	30 – 40 cm spread	7 ltr CG	Specimen	--
<i>Molinia caerulea</i> 'Heidebraut'	Full Pot. 30 cm spread.	7 ltr CG	Specimen	--
<i>Pachysandra terminalis</i>	20 – 30 cm spread	3 ltr CG	5 / m ²	--
<i>Pennisetum alopecuroides</i> 'Hamelin'	30 – 40 cm spread	7 ltr CG	Specimen	--

CG – Container Grown Stock;

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Shrub Planting Continued				
Name	Size	Pot	Density	Number
<i>Persicaria affinis</i> 'Darjeeling Red'	30 – 40 cm spread	3 ltr CG	3 / m ²	--
<i>Phormium cookianum</i> 'Cream Delight'	60 – 80 cm height.	15 ltr CG	Specimen	--
<i>Vinca major</i> 'Maculata'	20 – 30 cm height.	3 ltr CG	4 / m ²	--
<i>Vinca minor</i> 'Alba'	20 – 30 cm height.	3 ltr CG	4 / m ²	--

Herbaceous Planting				
<i>Astrantia major</i>	Full Pot 30 cm spread	3 ltr CG	Specimen	--
<i>Epimedium x rubrum</i>	Full Pot 30 cm spread	3 ltr CG	5 / m ²	--
<i>Geranium</i> 'Johnson's Blue'	Full Pot 30 cm spread	3 ltr CG	Specimen	--
<i>Hakonechloa macra</i> 'Aureola'	Full Pot 30 cm spread	3 ltr CG	Specimen	--
<i>Penstemon</i> 'Garnet'	Full Pot 30 cm spread	3 ltr CG	Specimen	--
<i>Phalaris arundinacea</i> 'Picta'	Full Pot 30 cm spread.	3 ltr CG	Specimen	--
<i>Rudbeckia occidentalis</i> 'Green Wizard'	Full Pot. 30 cm spread.	3 ltr CG	Specimen	--
<i>Sedum spectabile</i> 'Iceberg'	Full Pot 30 cm spread.	3 ltr CG	Specimen	--
<i>Sedum</i> 'Red Cauli'	Full Pot. 30 cm spread.	3 ltr CG	Specimen	--

Climber Planting - Pergola				
<i>Hydrangea petiolaris</i>	60 - 80 cm Cane trained height.	5 Ltr CG	Specimen	--
<i>Jasminum officinale</i>	80 - 100 cm Cane trained height.	3 ltr CG	Specimen	--
<i>Lonicera periclymenum</i> 'Serotina'	60 - 80 cm Cane trained height.	3 ltr CG	Specimen	--

CG – Container Grown Stock;

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Marginal Planting - Infiltration Basin				
Name	Size	Pot	Density	Number
<i>Acorus calamus</i> (Sweet Flag)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Caltha palustris</i> (Marsh Marigold)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Carex acutiformis</i> (Lesser Pond Sedge)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Filipendula ulmaria</i> (Meadow Sweet)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Iris pseudocorus</i> (Yellow Flag Iris)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Juncus effusus</i> (Soft Rush)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Lysimachia nummularia</i> (Creeping Jenny)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
<i>Mentha aquatica</i> (Water Mint)	30 cm spread. Well-developed crown.	3 ltr CG	Specimen	--
Aquatic / Marginal Planting; Planted in random groups of 1 – 3 plants.				

CG – Container Grown Stock;

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Meadow Grassland Mix and Wildflower Mix for Loam Soils - Communal Garden		
%	Latin name	Common name
Wildflowers		
0.5	Achillea millefolium	Yarrow
1.0	Centaurea nigra	Common Knapweed
2.0	Galium verum	Lady's Bedstraw
0.5	Geranium pratense	Meadow Cranesbill
1.5	Knautia arvensis	Field Scabious
0.5	Lathyrus pratensis	Meadow Vetchling
0.5	Leontodon hispidus	Rough Hawkbit
1.5	Leucanthemum vulgare	Oxeye Daisy
0.2	Lotus corniculatus	Birdsfoot Trefoil
0.5	Malva moschata	Musk Mallow
0.5	Plantago lanceolata	Ribwort Plantain
1.3	Primula veris	Cowslip
2.5	Prunella vulgaris	Selfheal
2.5	Ranunculus acris	Meadow Buttercup
1.5	Rhinanthus minor	Yellow Rattle
1.0	Rumex acetosa	Common Sorrel
2.0	Silene vulgaris	Bladder Campion
Grasses		
10	Agrostis capillaris	Common Bent
1.0	Anthoxanthum odoratum	Sweet Vernal-grass (w)
1.0	Briza media	Quaking Grass (w)
32	Cynosurus cristatus	Crested Dogstail
10	Festuca ovina	Sheep's Fescue
20	Festuca rubra	Slender-creeping Red-fescue
5.0	Phleum bertolonii	Smaller Cat's-tail (w)
1.0	Trisetum flavescens	Yellow Oat-grass (w)

Wildflower Grassland seed mix to be Emorsgate 'EM5 – Meadow Mix for Loam Soils' or equal and approved.

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Meadow Grassland Mix and Wildflower Mix for Wetland - Infiltration Basin		
%	Latin name	Common name
Wildflowers		
0.5	Achillea millefolium	Yarrow
0.5	Betonica officinalis - (Stachys officinalis)	Betony
2.0	Centaurea nigra	Common Knapweed
2.0	Filipendula ulmaria	Meadowsweet
1.5	Leucanthemum vulgare	Oxeye Daisy
0.5	Lotus corniculatus	Birdsfoot Trefoil
1.5	Plantago lanceolata	Ribwort Plantain
1.0	Primula veris	Cowslip
0.5	Prunella vulgaris	Selfheal
3.0	Ranunculus acris	Meadow Buttercup
1.5	Rhinanthus minor	Yellow Rattle
1.5	Rumex acetosa	Common Sorrel
0.5	Sanguisorba officinalis	Great Burnet
1.0	Silaum silaus	Pepper Saxifrage
0.5	Silene flos-cuculi - (Lychnis flos-cuculi)	Ragged Robin
1.0	Vicia cracca	Tufted Vetch
Grasses		
12	Agrostis capillaris	Common Bent
5	Alopecurus pratensis	Meadow Foxtail (w)
1	Anthoxanthum odoratum	Sweet Vernal-grass (w)
1	Briza media	Quaking Grass (w)
36	Cynosurus cristatus	Crested Dogstail
1	Deschampsia cespitosa	Tufted Hair-grass (w)
24	Festuca rubra	Slender-creeping Red-fescue

Wildflower Grassland seed mix to be Emorsgate 'EM8 – Meadow Mix for Wetlands' or equal and approved.