



IMPROVEMENTS TO ECOLOGY AND BIO-DIVERSITY

Ecological assessment undertaken to confirm existing habitat and to inform ecological enhancement measures.

- Proposed ecological and bio-diversity enhancements;
- Removal of invasive species (Japanese Knotweed).
- Landscape planting to north and west boundaries with native tree species.
- Landscape planting adjacent site entrance with native species.
- Boundaries between dwellings to be permeable to wildlife, achieved through forming boundaries with post and rail fencing, or providing gaps in fencing.
- Installation of bat access panels to new buildings.
- Installation of general bird boxes (1MR Schweger Avianex Nest Box) to provide opportunities for nesting birds.
- Installation of bird boxes associated with woodland bird species to be installed at the retained mature trees within the site (Schweger 3SV, 1N, 2M, & 2H bird boxes).
- Planting of low maintenance wildflower grassland to landscaped amenity area to north of plot 2.
- Creation of dead wood habitat piles for colonisation by invertebrates, fungi, and small mammals including hedgehog to north of plot 2.

Ecological enhancements to areas of landscape planting within residential development to comprise;

- Native species, & species known to be of value for the attraction of wildlife.
- Incorporation of trees which support blossom & fruit which will attract insects.
- Understorey & ground cover planting design to optimise the attraction of invertebrates including bumblebees & butterflies.
- Planting scheme to include flowering species to maximise the opportunities for feeding invertebrates & for the attraction of foraging bats and birds.

PLANTING SCHEDULES:

TREE SCHEDULE							
Abbrev.	Botanical name	Common Name	Girth Dia cm	Height cm	Root Zone	Specification	
A lam	Amenlaechier kamarii	Juneberry	12-14	300-350	RB	3x; HS; clear stem 175-200cm; 5 brks	
C be	Carpinus betulus	Common Hornbeam	12-14	300-425	RB	3x; Large Feathered 7 brks	
C k c	Cornus kousa chinensis	Chinese Dogwood	250-300	45L		3x; Multi-stem; bushy; 3 stems min.	
C lae 'P' S'	Ordoagrus levisgata 'Paul's Scarlet'	Midland Hawthorn ('Paul's Scarlet')	12-14	350-425	RB	3x; HS; clear stem 175-200cm; 5 brks	
C mon	Ordoagrus monogyna	Common Hawthorn	12-14	350-425	RB	3x; HS; clear stem 175-200cm; 5 brks	
M 'E'	Malus 'Evereste'	Orch Apple Evereste	12-14	350-425	RB	3x; HS; clear stem 175-200cm; 5 brks	
S auc 'C R'	Sorbus aucuparia 'Cardinal Royal'	Rowan 'Cardinal Royal'	12-14	350-425	RB	3x; HS; clear stem 175-200cm; 5 brks	

SHRUBS							
Abbrev.	Botanical name	Common Name	Girth Dia cm	Height cm	Root Zone	Specification	
C can	Cornus canadensis	Creeping Dogwood	15-20	3L		Several shoots; 5 brks	
C san 'M F'	Cornus sanguinea 'Midwinter Fire'	Dogwood 'Midwinter Fire'	40-60	3L		Branches; 3 brks	
EUD COM	Euonymus alatus 'Compactus'	Winged Spindle 'Compactus'	40-60	5L		Bushy; 7 brks	
E e 'R C'	Euonymus europaeus 'Red Cascade'	Spindle Tree 'Red Cascade'	60-80	10L		Branches; 3 brks	
E a r	Euphorbia amygdaloides robiae	Mrs Robb's Bonnet		3L		Full pot	
G pr	Gaultheria procumbens	Chickensberry	15-200	2L		Several shoots; 10 brks	
H hi	Hedera hibernica	Holly Ivy	60-80	3L		Several shoots; 5 brks	
H q	Hydrangea quercifolia	Oak-leaved Hydrangea	40-60	10L		Branches; 5 brks	
I a	Ilex aquifolium	Common Holly	60-80	10L		Leader with laterals	
L hi 'M'	Lonicera nitida 'Magnum'	Box Honeysuckle	30-400	3L		Bushy; 6 brks	
Mah CAR	Mahonia kurylensis garsipensis 'Soft Carens'	Mahonia 'Soft Carens'	20-40	10L		Bushy; 7 brks	
M x m 'W S'	Mahonia x media 'Winter Sun'	Mahonia 'Winter Sun'	30-40	10L		Bushy; 2 brks	
P t 'D V'	Pachysandra terminalis	Japanese Spurge	15-200	2L		Several shoots; 7 brks	
S co	Sarcococca confusa	Sweet Box	20-30	10L		Bushy; 6 brks	
S x c 'K O'	Skimmia x confusa 'New Green'	Skimmia 'New Green'	30-40	5L		Bushy; 3 brks	
T b	Taxus baccata	Common Yew	50-600	10L		4x; Ball shape; neatly clipped	
V x b 'D'	Viburnum x bodnantense 'Down'	Viburnum 'Down'	60-80	RB		Branches; 3 brks	
V op 'C'	Viburnum opulus 'Compactum'	Guelder Rose 'Compactum'	30-40	5L		Bushy; 4 brks	
V mi 'G J'	Vinca minor 'Gertrude Jekyll'	Lesser Periwinkle 'Gertrude Jekyll'	20-300	2L		Several shoots; 3 brks	

HERBACEOUS							
Abbrev.	Botanical Name	Common Name	Girth Dia cm	Height cm	Root Zone	Specification	
A M	Aconitum mollis	Bea's Breaches		3L		Full pot	
A mo	Achillea mollis	Lady's Mantle		2L		Full pot	
Aub 'H S'	Anemone x hybrida 'Honorine Jobert'	Japanese Anemone 'Honorine Jobert'		3L		Full pot	
B m 'J F'	Brunnera macrophylla 'Jack Frost'	Siberian Bugloss 'Jack Frost'		2L		Full pot	
E vr	Epimedium x rubrum	Red Barrenwort		3L		Full pot	
G ma 'A'	Geranium macranthum 'Album'	Balkan Cranesbill 'Album'		3L		Full pot	
P a 'S'	Persicaria affinis 'Superba'	Knotweed 'Superba'		3L		Full pot	
T g	Tellima grandiflora	Fringe Cups		2L		Full pot	
T c	Tiarela cordifolia	Foam Flower		3L		Full pot	

GRASSES							
Abbrev.	Botanical Name	Common Name	Girth Dia cm	Height cm	Root Zone	Specification	
C o 'E'	Carex oshimensis 'Evergold'	Japanese Sedge 'Evergold'		3L		Full pot	
H m	Hakonechloa macra	Hakone Grass		3L		Full pot	

NATIVE MIXED HEDGE							
Abbrev.	Botanical name	Common Name	Girth Dia cm	Height cm	Root Zone	Specification	
C mon	Ordoagrus monogyna	Common Hawthorn	60-80	B		1+1; Transplant - seed raised	40
C cv	Corylus avellana	Common Hazel	60-80	B		1+2; Transplant - seed raised;	20
I a	Ilex aquifolium	Common Holly	60-80	5L		Branches; 3 brks	20
L v	Ligustrum vulgare	Wild Privet	60-80	5L		Leader with laterals	20

GRASS MIXES			
Woodland Mix (25g perm2) EXT Emeragote Seeds			
% mix	Botanical name	Common Name	
3.0%	Wildflowers (20%)	Garlic Mustard	
0.8%	Alliaria petiolata	Ranunculus	
1.6%	Betonica officinalis = (Stachys officinalis)	Betony	
1.0%	Chrysanthemum leucanthemum	Rough Chervil	
0.4%	Digitalis purpurea	Foxglove	
2.0%	Filipendula ulmaria	Meadowsweet	
1.0%	Gallium album = (Gallium mollugo)	Hedge Bedstraw	
1.0%	Geum rivale	Water Avenas	
0.2%	Geum urbanum	Wood Avenas	
2.8%	Hyacinthoides non-scripta	Bluebell	
0.8%	Hypericum hibernicum	Hairy St John's-wort	
1.5%	Prunella vulgaris	Selfheal	
2.7%	Silene dioica	Red Campion	
0.2%	Silene flae-occid = (Lychnis flae-occid)	Ragged Robin	
1.0%	Teucrium scorodonia	Wood Sage	
10.0%	Slow growing grasses (80%)	Common Bent	
2.0%	Agrostis capillaris	Sweet Vernal-grass (w)	
7.0%	Anthoxanthum odoratum	False Brome (w)	
20.0%	Brachypodium sylvaticum	Crested Dogtail	
2.0%	Cynosurus cristatus	Tufted Hair-grass (W)	
28.0%	Deschampsia cespitosa	Slender-creeping Red-fescue	
8.0%	Festuca rubra	Slender-creeping Red-fescue	
8.0%	Poa nemoralis	Slender-creeping Red-fescue	
8.0%	Poa trivialis	Rough-stalked Meadow-grass	

GRASS MIXES			
Shade Tolerant Mix (25g perm2) EG23 Emeragote Seeds			
% mix	Botanical name	Common Name	
8.0%	Agrostis capillaris	Highland Bent	
40.0%	Festuca rubra	Slender-creeping Red-fescue	
32.0%	Festuca rubra ssp. Commutata	Cheewing's Fescue	
8.0%	Poa nemoralis	Smooth stalked grass	
8.0%	Poa trivialis	Rough-stalked Meadow-grass	

EXTERNAL LIGHTING SPECIFICATION
To minimise indirect impacts from lighting it is proposed that artificial lighting is only directed where necessary for safe use of amenity areas. None of the external lighting installed will be greater than 1,800 lumens (15 Watts) and only LED lights will be installed (they do not emit on the UV spectrum, are more easily controllable in terms of direction/spill and can be turned on and off instantly). Lighting to be fitted as low as practical to external walls, and fixed in a steep downward angle with the lighting housing further helping to direct light below the horizontal plane.

WMDL	W.M.D.L. - Wall Mounted Down Light Use Saxby Odyssey 7W - wall down lights or similar (630 lumens).
WMBL	W.M.B.L. - Wall Mounted Bulkhead Light Use Portchester Hood 15W - LED Bulkhead or similar (1,782 lumens).
ELB	E.L.B. - External Lighting Bollard Use Westminster 10W - LED bollard or similar (1,320 lumens).

KEY TO BOUNDARY STRUCTURES & LANDSCAPING

fence p/r 1.5m	New 1.5metre high timber post & rail fence to site boundaries.
fence f/e 1.8m	Plot divisions to rear gardens formed with new 1.8metre high feather edged timber fence. Gaps to be left at base of fencing to be permeable to wildlife.
stone wall 1.2m	New 1.2metre high natural stone walling.

	Proposed shade tolerant lawn mix (Emorsgate EG23).
	Proposed woodland wildflower mix (Emorsgate EH1).
log pile	Proposed habitat log pile (using trees felled on site).
	Proposed planting areas (shade tolerant mix of shrubs, perennials and grasses). (see planting schedule for details).
	Proposed tree planting (see planting schedule and plan annotation for key tree details).
	Proposed hedge planting. (see planting schedule and plan annotation for details).
resin	Proposed permeable resin-bound areas (buff colour)
paving	Perimeter paths & patios to individual dwellings to be Heritage paving by Marshalls (buff finish).

Amendments			
Title			
DEVELOPMENT OF TWO DETACHED DWELLINGS TO PREVIOUSLY DEVELOPED SITE AT FORMER WICKEN HALL MILL, SMITHY GREEN, NEWHEY~			
Client			
LEIGH KELLY			
Dwg. No.			
22/1281/206 - LANDSCAPING DESIGN			
Date	Plot Scale	Drawn by	Status
14.12.2022	AT@1:200	JPE	PLANNING
JPE CONSULTANCY LIMITED			
ARCHITECTURAL DESIGN & PLANNING			
9 Woodend Drive, Stalybridge, Cheshire, SK15 2SF			
Telephone 07875 627 988 jim@jpeconsultancy.co.uk			