

Davies Lane Primary School

Five Year Tree Implementation and Management Strategy.

April 2014

Prepared By Sprunt Landscape for Balfour Beatty Construction Services

Written by	G.Bailey
Checked	
Date	23.04.14
File Ref	12450/4.1/GB
Revision	

General summary

Site:	Davie Lane Primary School, LB Walthamstow
Description:	Part of Pastures Site (South of Davies Lane) - Construction of two storey classroom block to accommodate sports hall, offices and ancillary educational spaces with internal connection to the existing Davies Lane Children's Centre, widening of vehicle entrance and formation of new car park, new pedestrian gates, play space, landscaping, boundary fencing and substation enclosure.
Objective:	To provide an Initial establishment and five year management plan for the tree planting of the development in relation to the requirements as set out in conditions 4 & 7 of the decision notice.
Prepared by:	Sprunt
Managing Responsibility:	For the first year after completion of the development will be subject standard defects liabilities of the construction contract. At the end of the defects period all maintenance will be carried out by a term landscaping contractor in accordance with principles outlined in this report and the attached schedules and specification. This will be continued by the site management company for all subsequent years.
Date:	April 2014

1.0 Introduction

- 1.1 This document sets out the necessary operations for the implementation, phasing and timing of tree planting for the former pastures site within the first five years of planting. The works are to be a combination of the initial school extension construction contract and approved shall thereafter be implemented prior to the first use of the extensions

2.0 Long term design objectives

- 2.1 The landscape design aims to create an attractive, durable and safe environment for Pupils, staff and other users with the following specific long term objectives for the site:
- Provision of a well-kept playground allowing for play and interactions with nature
 - Provision of informal integrated and natural play.
 - Provision of appropriate car parking and cycle parking.
 - Safe and secure habitat area and pond for use in education and as a buffer between the development and adjacent housing
 - A secure site with well maintained boundaries.
 - A healthy well-balanced framework of planting to protect, screen, enhance wildlife and provide sensory stimulation and education value.
 - Long term street trees in accordance with arboricultural requirements to form a healthy and balanced planting structure.

3.0 Background

- 3.1 Sprunt Architects were commissioned by Mansell (now Balfour Beatty) to provide Architecture and Landscape proposals for the Extension of Davies lane Primary School
- 3.2 The controlling authority is the LB Waltham Forest, who should be consulted on any matters relating to existing and proposed trees and changes in elevations.

Sycamore House
Waltham Forest Council
Forest Road
London E17 4JF

4.0 Planting schedule

- 4.1 The planting design has been developed to provide seasonal colour, aesthetically pleasing areas for relaxation and robust spaces with high footfall. The approach has been to minimise long term maintenance inputs once plants have become established. By planting species which are generally suited to the likely conditions and complement each other so as to provide interest all year round. For areas which will have a high level of pedestrian traffic robust plants and turf have been used so as to reduce the risk of loss from trampling or brown earth areas during the winter.

Perennial species have been specified in mixes to cover against plant failures, provide year round structure, cover and interest and create areas for relaxation and enjoyment. Native plants have been used where suitable to improve the likely chances of survival.

Native Hedge (thorn less adjacent to play areas) and climber planting has been used to screen the bin stores, car park and act as a buffer zone between the pastures site and residential properties to the South. . A large level of Native tree planting has been used to replace the Lawson firs along the rear boundary, and enhance the street scene along Davies lane. This has a phased approach with predominantly evergreen species used along the Southern boundary and more ornamental species used at the frontage.

The following notes, schedule and specification (see appendix) sets out specific guidance for operations that will be required to ensure the Healthy establishment of newly planted trees and the management requirements for the existing retained trees on site. The frequency of these operations will vary with more intensive maintenance requirements during establishment of planting in the first 5 years. It will also depend on prevailing climatic conditions.

5.0 Tree Strategy

- 5.1 All reference to tree numbers relate to the original survey report from Landscape Planning ltd.
- 5.2 An initial assessment was made of the site according to the requirements of the scheme and the need to establish a habitat area. Trees to be retained were selected according to comment from the report and site assessment. (See 12450_90_02-C2)
- 5.3 The main tree removal works are proposed to be carried out over two phases with the initial works completed in April to allow site set up and enable services and boundaries to be established. Tree No. 35 has also had to be removed due to having storm damage to the crown and black dust disease which meant it posed a health and safety risk to site operatives. Other trees are set to be removed in later years once the new tree planting has established and is providing a screen function by itself.
- 5.4 The Lawson's firs and ground cover vegetation have to be removed so as to ensure the long term establishment of the proposed habitat area. These are scheduled to be removed in November 2014 so as to retain a screening function during the main construction phase of the works. The removal times with the next suitable planting season for the new trees so as to maximise the chances of establishment.
- 5.5 New tree planting is split into two phases; one set is within the contract works to be completed by December 2014 whilst the other planting is to be completed by the school by December 2015.
- 5.6 The new planting within the contract focuses primarily on the Southern boundary with the adjacent residential properties. This is a mix of evergreen and deciduous species with the design intent to be to provide year round interest and an element of screening throughout the year. These will also compliment the native hedge planting proposed for this boundary.
- 5.7 Some new tree planting is proposed along the frontage so as to contribute to the street scene and provide a presence for the new development.
- 5.8 The remaining tree planting is to be carried out by the school by 2015. This is intended to enhance the landscape for the benefit of all users, provide additional habitats and foraging for wildlife and contribute to the screening function of the boundary by filling gaps left by subsequent tree removal.

6.0 General maintenance

- 6.1 All works to be carried out in accordance with BS 3998, statutory legislation, the attached drawings and schedule
- 6.2 Future maintenance and responsibility for the landscape to be handed over to Davies Lane School or the appointed term maintenance contractor at the end of the defects liability period.
- 6.3 The period of management and maintenance of the site will be maintained by Davies Lane School and their appointed maintenance contractor in perpetuity.
- 6.4 The Contractor shall carry out all replacements that may be necessary to soft landscaping areas (trees, shrubs, perennials, grass and meadow) during the defects liability period. After which the responsibility is then transferred to the School and their appointed maintenance contractor.
- 6.5 The maintenance contractor shall be responsible for all periodic maintenance and replacement thereafter for all planted areas to which its management agreement relates, and shall ensure that any landscape contractor employed by it carries out periodic maintenance of all such areas in accordance with the enclosed specification and schedule. Inspection checks shall be carried out by a competent person, either a member of BALI or the LI, acting for the Management Company, at a minimum of monthly intervals and the appropriate work carried out.
- 6.6 No existing trees or shrubs shall be removed or cut without the written agreement of the Local Planning Authority Tree Officer. Existing trees highlighted for retention as part of the application are to be protected in line with BS 5837 trees in relation to construction and undisturbed throughout the course of the development and subsequent maintenance regime.
- 6.7 Annual works in relation to the trees include: (refer to Drawing 12450_90_05, 06, &07)
- Annual inspections for disease damage or stress,
 - Watering in time of drought until established.
 - Removal of any self-clinging or climbing plants (Ivy etc.) from trunks and branches.
 - Any necessary formative pruning. Including the removal of diseased or dead branches.
 - Ensuring trees are heeled in and protected.
 - Use of mower guards for trees in turf areas.
 - Mulching to the base of the tree and incorporation of slow release fertiliser for the first three years to aid root establishment.
- 6.8 Hedges should be pruned in late winter (mid to late January) prior to budding so as to provide winter foraging for wildlife. The tops should be pinched out so as to promote basal and lateral growth so as to establish a thick hedge. Ideally after 10 years the hedge should be laid to provide a good solid base to grow from.
- 6.9 Meadow areas after the first year establishment should be cut back once a year in late September/ October with all arising removed from site to a suitable compost area. This is to prevent domination by highly competitive species and ensure a diverse and rich sward.
- 6.8 After five years all tree stakes and ties should be removed from the trees and disposed of off-site. Any necessary pruning such as crown lifting and thinning to encourage vertical growth should also be completed.

8.0 Soft landscape management and maintenance general requirements

8.1 This section sets out specific guidance for operations that will be required to ensure that the soft landscape remains in good condition. The frequency of these operations will depend on prevailing climatic conditions and the degree of wear and tear caused by users. (refer to specification schedule in appendix)

8.2 Summary of maintenance items and long term objectives:

Item	Operation	Long term objective
Watering	<ul style="list-style-type: none">Wet full depth of topsoil at a frequency to suit climatic conditions and growth stage of plants.Avoid damaging or loosening plants.Water supply to be agreed.Informal irrigation to be provided through links to permeable, root rain metro connectors, Arbor vents and SUDs planter design	Healthy thriving plants at all times
Weed control	<ul style="list-style-type: none">For first two years at quarterly intervals Remove all weeds to shrub and perennial beds by hand, including roots (pernicious weeds to be removed in line with statutory requirements)Once plants established/ canopy closure, weed removal to be carried out in Spring and at the end of the summer.Avoid disturbing other plants and rake area to a neat clean condition.Top up levels of mulch as specified to a depth of 50mm once a year during establishment.	Weed cover less than 5% and no weed to exceed 100mm high
Grass cutting	<ul style="list-style-type: none">Carry out between 10- 15 cuts per year as at intervals of 10-14days as necessary to maintain a sward height of 50mmEnsure ground is not wet and turf will not be damaged by mowing operations prior to first cut.For areas planted with bulbs do not carry out the first cut till late May early June to allow bulb planting to die back.Ensure weed free turf by annual application of selective weed killer by trained operative. Give notice prior to applicationAll herbicide applications to be carried out by a suitably qualified person	Maintenance of an even and aesthetic sward for recreation and amenity use.

Wild flower meadow	<ul style="list-style-type: none"> • All wildflower turf to be laid on cultivated low nutrient sub soil • In first year carry out two establishment cuts one in early Spring (late Feb – early march) and one in autumn (September) • Subsequent years carry out one cut in September/October • For all cuts remove cuttings from site so as to allow seed germination and limit establishment of dominant species. 	Long term establishment of a bio diverse, aesthetic and low maintenance planting border to Town Lane
Cleanliness	<ul style="list-style-type: none"> • Collect and remove extraneous rubbish, litter and debris from site as required. • Collect fallen leaves every two weeks at the end of autumn and compost on site or remove to local recycling centre. 	Clean planting beds.
Soil amelioration	<ul style="list-style-type: none"> • Prick up compacted soil when necessary. • Lightly fork over all planting beds to a depth of 100mm once a year. • Apply appropriate compost or slow release fertiliser to planting beds once a year in March/April during establishment. 	Good soil conditions for continued healthy growth.
Trimming	<ul style="list-style-type: none"> • Remove excess growth as required to keep planting clear of services, routes and signs. • Carryout formative pruning of hedges (to suit species) in the first two years to promote lateral and basal growth • Trim hedges once a year in late January to provide winter food source and habitat for wild birds by trimming back lateral branches once planned height of 1m is reached. • Trim older flowering stems of herbaceous perennials once a year in autumn • Cut back ornamental grasses in early spring where appropriate for specific species • Cut back perennials in late winter/early spring where appropriate for specific species 	Neat planting structure appropriate to residential context.
Pruning	<ul style="list-style-type: none"> • Crown lift trees as required to maintain 2.5m clear stem where adjacent to pedestrian and vehicle routes. Ensure clear stem does not exceed 50% of height of tree to maintain a natural appearance. • Prune young trees once a year in late summer to ensure balanced head and a single leader. Remove dead and duplicated branches and potential weak or tight forks. • Prune shrubs once a year after flowering period. Remove all dead foliage and wood, and broken or damaged branches. • Arrange for trees to be inspected by a qualified arboriculturalist every 5 years to identify health problems and work needed 	Plants that are well shaped appropriate to species, location, season and stage of growth, in accordance with good horticultural and arboricultural practice.

Plant replacement	<ul style="list-style-type: none"> Replace all dead, damaged or diseased plants as required with originally specified species at a size to match maturity of established planting. 	Planting design as originally installed.
Ties and stakes	<ul style="list-style-type: none"> Replace loose, broken or decayed stakes and adjust, re-fix or replace loose or defective ties as required. Remove stakes and ties when no longer required after establishment. Reattach climbers to supporting structures with 1mm diameter black plastic coated steel wire. 	Healthy growth with no chafing.
Thinning and dividing	<ul style="list-style-type: none"> Selectively remove planting as required once foliage has begun to touch. Lift, divide and separate over mature clumps of herbaceous perennials and replant every 5 years 	Good planting structure, encouraging new growth and maintaining healthy stock.
Snow clearance	<ul style="list-style-type: none"> Clear snow from evergreens as required following excessive snowfall 	

9.0 GRASS

- 9.1 Maintain grass in a manner appropriate to its use. Discolouration, scorch, wilt, fungal growth, water logging and compaction are to be prevented at all times. Any damaged caused through trampling scalping, abrasion or excavation is to be repaired immediately. All cutting operations to be carried out in the growing season.
- 9.2 Slight hollows and depressions to be top dressed with fine compost early in the growing season and the grass allowed growing through.
- 9.3 Deeper hollows and excavations to be treated by cutting out a square of turf, building up using compost, sand and soil mixture with the turf square replaced at the correct level and rolled in.
- 9.4 Any re seeding of bare areas to be carried out on cultivated ground with the seed cast in two directions at right angles to each other at a rate of 35g/per m²
- 9.5 All turf within the courtyards to be maintained by push along mowers operated by suitably trained individuals.
- 9.6 A suitable slow release fertiliser is to be applied as per manufacturer's instructions early in the growing season to encourage healthy sward development.
- 9.7 Grass Grid maintenance paths to be cut every other grass cut.
- 9.9 Meadow areas to be cut as per schedule with all cuttings removed from site.

10.0 TREES & SHRUBS

- 10.1 All trees and shrubs to be maintained in perpetuity by School/appointed term contractor.
- 10.2 Flowering shrubs and perennial plants to have dead heads, fallen leaves and litter removed during monthly collections.
- 10.3 All planting areas to be firmed in as necessary during monthly inspections with any protective fencing repaired or re sited at the same time.
- 10.4 All tree works to be carried in accordance with BS3998 Tree work specifications and by a suitably qualified arboriculturalist.
- 10.6 For 2 year defects period all plants to have annual application of compost and slow release top dressing to aid establishment
- 10.7 All formative pruning to be in accordance with plant species and carried out by a horticultural trained operatives. Any encroaching growth over windows, grassed areas, paths , roads, signs, lighting, sightlines and private terraces to be removed/cut back.
- 10.8 Climbers to be assisted in growth by utilising loose plastic ties to fix to permanent support structures (tensile wires, railings). Growth to be entwined and encouraged onto objects where possible.
- 10.9 Maintain bark mulch to a depth of 50mm at an even spread following maintenance operations on an annual basis. Site won chippings can be used to supplement materials.
- 10.10 Any plants which die are to be immediately removed from site and replaced with a container grown specimen in line with original specification. If planting outside of the planting season allowance needs to be made for watering in to aid establishment.
- 10.11 Formative pruning of flowering and fruiting species to be carried out in winter once main fruits have dropped so as to provide seasonal interest and winter foraging for wildlife.
- 10.12 Reinstatement planting is to be carried out in suitable climatic conditions with mulch moved aside and the soil cultivated to a depth of 150mm. Care is to be taken to avoid disturbance and damage to adjacent planting. Replacement plants to be as per the original specification.

11.0 HEDGING

- 11.1 Hedge maintenance to be carried out aforementioned in the previous sections and in line with the attached specification and schedule.
- 11.2 New hedge plating is to have cleft chestnut pale or strained tensile wire protective fencing for a minimum of 2 years (up to 5years) to aid establishment.
- 11.3 General trimming of hedges to be as per attached specification and in accordance with species.

- 11.4 Trimming of hedging to banked car park vent areas is to be from all sides with lower access gained utilising service box ducting and wall mounted clamps to get to the lower level of the bank. The hedge height is to be maintained at 1100mm on the front edge with the level continued across irrespective of the slope so as to provide a continuous line.

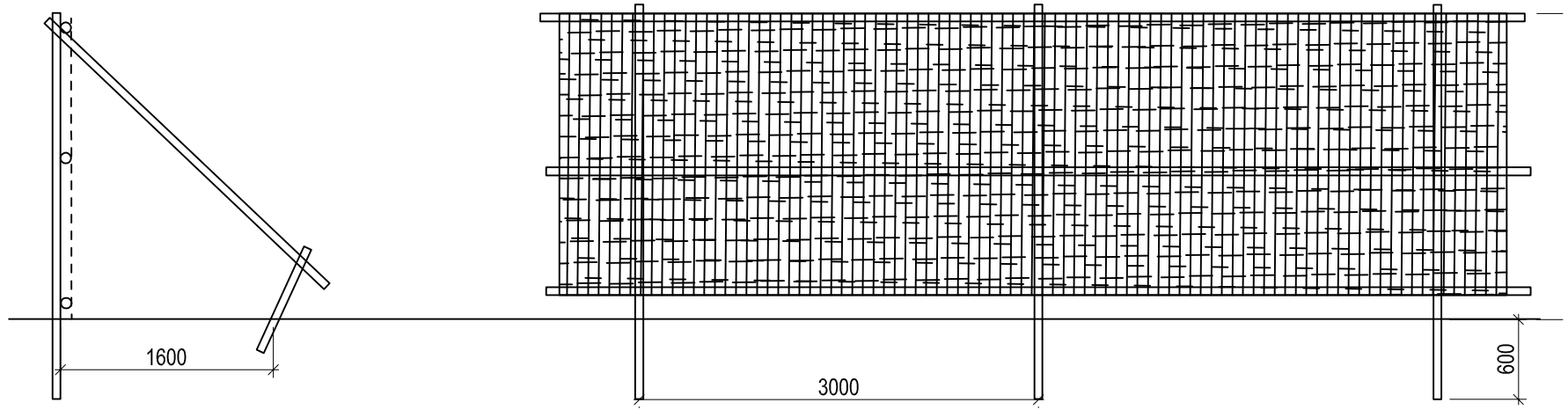
Deep hedges and the vent sections are to be maintained using mechanical and long reach mechanical pruning and trimming equipment. All cuttings to either be chipped and spread on site or removed and disposed of offsite.

- 11.5 Trimming of hedging to metal grille car park vent areas is to be from all sides with rear access gained utilising locked access gates as indicated on the plan. Deep hedges and the vent sections are to be maintained using mechanical and long reach mechanical pruning and trimming equipment. Contractor to place tarpaulin or sheeting over mesh areas prior to cutting so as to minimise debris falling into the lower car park vent shelf. All cuttings to either be chipped and spread on site or removed and disposed of offsite.

12.0 EXISTING TREES

- 12.1 All tree works to be carried out by suitably qualified arboriculture consultant and member of the Arb Association. Before starting work identify which trees and shrubs require works e.g. removal, pruning, canopy thinning, removal of diseased and dead wood etc. All works to be carried out in accordance with BS3998 with trees left well balanced and natural in appearance.
- 12.2 Chainsaw and climbing works to be carried out by suitably qualified operatives who hold certificates of competence.
- 12.3 Any wood sections over 75mm in diameter to be cut and stockpiled on site, as habitat areas to the rear of wildflower planting and at the base of naturalised shrub planting. Sections over 200mm in diameter to be removed from site.
- 12.4 Any large trees requiring felling to have stumps ground out and area made good according to planting within that area.

Appendix 1. Drawings



BARRIER FOR ROOT PROTECTION ZONE 1:50

Tree protection area to be constructed with standard scaffold pole and weldmesh panels, secured together with standard clamps, in line with BS5837:2005

Uprights to be driven @ 600mm into ground

Panels secured to uprights with wire ties and where necessary standard scaffold clamps weldmesh wired to uprights and horizontals, with wire twisted and secured on inside face of fencing to avoid easy dismantling.

Notes

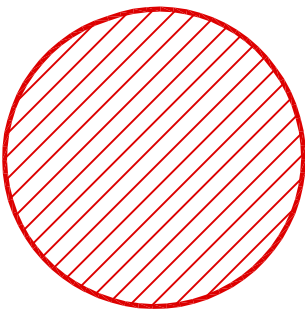
- All protection of existing trees to be in accordance with BS5837:2005 Trees In relation to construction - recommendations.
- All root protection areas shown in accordance with tree survey.
- No works should be carried out within the RPA without prior consultation with the landscape architect and written consent for the works to proceed.
- HV cable easement zone position and dimension to be confirmed by engineer.

REFER TO DRAWINGS
12450_90_05-07 FOR FIVE YEAR TREE STRATEGY

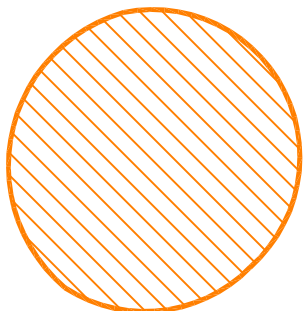
N.B. OAK, SYCAMORE AND OTHER SUITABLE HARDWOODS LOG + TRUNK SECTIONS > 300mm DIAMETER TO BE RETAINED ON SITE AND OR REUSED IN LANDSCAPING.



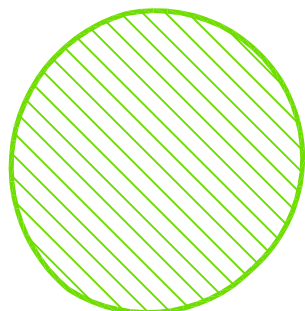
LINE OF TREE PROTECTION FENCING



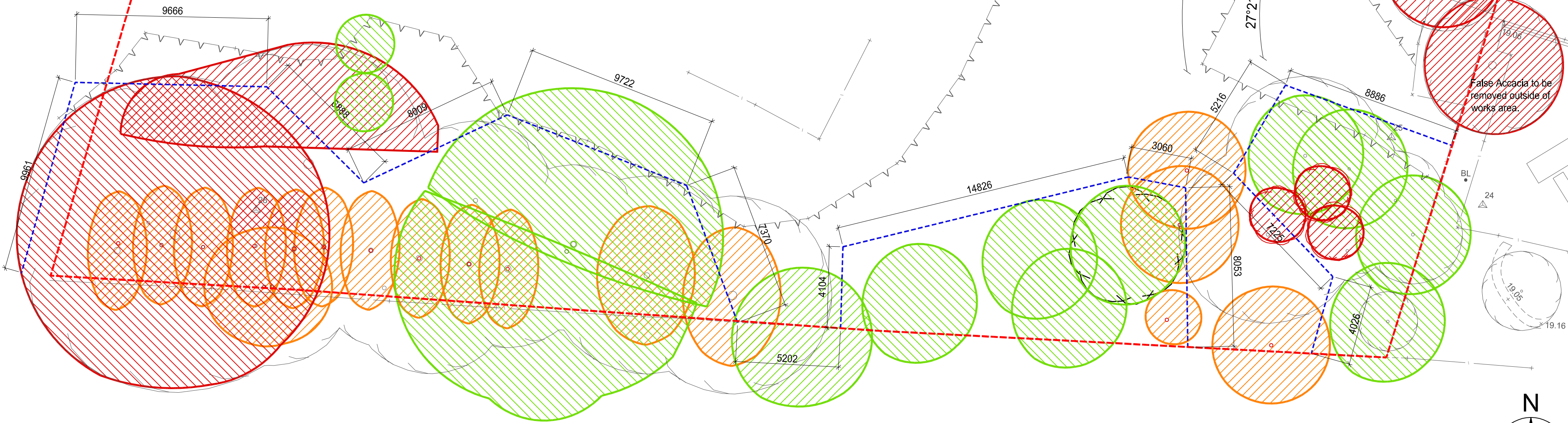
TREE TO BE REMOVED APRIL 2014



TREE TO BE REMOVED NOVEMBER 2014



TREE TO BE RETAINED



C2	EP	24.04.14	GB	UPDATED TREE PLAN
C1	EP	04.03.14	GB	FOR CONSTRUCTION
D1	GB	21.02.14	JK	FOR PLANNING
REV	BY	DATE	CHK	DESCRIPTION

STATUS

FOR CONSTRUCTION

CONTRACTOR

MANSELL

PROJECT

DAVIES LANE SCHOOL

CLIENT

LB WALTHAM FOREST

DRAWING TITLE

TREE PROTECTION PLAN

DATE CREATED	DATE AMENDED	SCALE
25.04.14	25.04.14	1:200@A1
DRAWN BY	AMENDED BY	CHECKED
GB	EPOWELL	GB

DRAWING NO & REVISION

12450_90_02-C2

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PLANT SCHEDULE

PROJECT: Daves Lane Primary School
JOB NUMBER: 12450

	Quantity	Root protection	Density (m)	Form	Age/Condition	Height(cm)	Min. no. branches	Girth(cm)	Clear stem(cm)
TREES									
planted by Mansell									
Alnus glutinosa (Alder)	1	RB	as shown	Semi-mature Standard	4x	425-600	-	20-25	min 200
Ilex aquifolium (Holly)	4	RB	as shown	-	4x	200-225	-	-	-
Pinus sylvestris (Scots Pine)	3	RB	as shown	Semi-mature Standard	7x	300-400	-	20-25	min 200
Prunus avium Plena (Cherry)	5	RB	as shown	Extra heavy standard	3x	425-600	5	14-16	175-200
Quercus robur (Oak)	1	RB	as shown	Semi-mature Standard	4x	425-600	-	20-25	min 200
Tilia cordata 'Rancho' (Small leaved Lime)	3	RB	as shown	Extra heavy standard	3x	min 450	5	16-20	min 200

	Quantity	Root protection	Density (cm)	Habit	Age/Condition	Height (cm)
HEDGING						
Thornless hedge mix:						
Acer campestre (Maple) - 5%	9	B	33	Transplant	1+1	60-80
Prunus cerasifera (Cherry Plum) - 50%	81	B	33	Branched	0+2	60-80
Prunus domestica (Plum) - 40%	66	B	33	Transplant	1+1	60-80
Rubus fruticosus (Thornless variety) - 2%	4	B	33	Transplant	1+1	60-80
Viburnum opulus (Guelder Rose) - 3%	5	B	33	Transplant	1+1	60-80
Native hedge mix:						
Acer campestre (Maple) - 3%	35	B	33	Transplant	1+1	60-80
Cornus sanguinea (Dogwood) - 2%	23	B	33	Branched	1+2	60-80
Corylus Kent Cob (Hazel) - 5%	57	B	33	Branched	1+2	60-80
Crataegus monogyna (Hawthorn) - 75%	845	B	33	Transplant	1+1	60-80
Prunus padus (Bird Cherry) - 2%	23	B	33	Branched	0+2	60-80
Prunus spinosa (Blackthorn) - 10%	112	B	33	Branched	0+2	60-80
Rosa canina (Dog Rose) - 3%	35	B	33	Branched	1+1	60-80

notes:
A. bare root to be planted nov-mar, container grown plants to be used at other times
B. double row hedges to be planted 40cm apart in staggered rows
C. Hedge to be laid after 5-7 years

	Quantity	Root protection	Density (/m2)	Habit	Age/Condition	Height (cm)	Min. no. branches	Plant in groups of
SHRUBS								
Choisya ternata	23	C 3L	3	Branched	-	30-40	4	3-5
Hydrangea paniculata 'Grandiflora'	23	C 3L	3	Branched	-	30-40	3	3-5
Lavandula angustifolia 'Hidcoté'	40	C 3L	5	Bushy	-	20-30	5	3-5
Pieris japonica 'Mountain Fire'	31	C 3L	4	Bushy	-	30-40	3	3-5
Ribes sanguineum	23	C 2L	3	Branched	-	40-60	3	3-5
Spiraea arguta 'Bridal Wreath'	31	C 2L	4	Bushy	-	30-40	4	3-5
Viburnum opulus	23	C 2L	3	Branched	-	40-60	3	3-5

	Quantity	Root protection	Density (/m2)	Plant in groups of
PERENNIALS				
Achillea 'Coronation Gold'	18	C 1.5-2L	5	1-3
Asiatic 'superba'	20	C 1L	5	3-10
Brunnera macrophylla	50	C 1L	8	3-10
Calamagrostis x acutiflora 'Karl Foerster'	11	C 1.5-2L	3	1-3
Dryopteris filix-mas	50	C 1.5-2L	4	3-10
Galium odoratum	200	C 1L	15	20+
Festuca glauca 'Elijah Blue'	30	C 1.5-2L	8	3-10
Mascanthus sinensis	4	C 1.5-2L	1	1
Stipa arundinacea	30	C 1.5-2L	8	1-3
Primula floribunda	30	C 1L	10	3-10
Waldsteinia ternata	50	C 1L	15	20+

WILDFLOWER MEADOW	
Woodland Meadow Mix	130m2

notes:
A. Planted in accordance with specification Q30

	Quantity	Root protection	Density (/m2)	Plant in groups of	Position
AQUATICS					
Acorus calamus 'Variegata'	15	C 0.5-1L	4	3-10	marginal
Butomus umbellatus	20	C 0.5-1L	5	1-3	marginal
Callitriche palustris	20	C 0.5-1L	10	3-10	marginal
Iris innominata	15	C 0.5-1L	10	3-10	marginal
Iris pseudacorus	15	C 0.5-1L	3	1-3	marginal
Merithia aquatica	20	C 0.5-1L	6	1-3	marginal
Nymphaea alba	6	C 0.5-1L	1	1	deep
Ranunculus lingua	20	C 0.5-1L	4	1-3	marginal
Typha minima	15	C 0.5-1L	8	3-10	marginal

	Quantity	Bulb size	Density (/m2)	Plant in groups of
BULBS				
Allium christophii	20	10/12	8	3-10
Anemone nemorosa	150	6+	20	3-10
Cyclamen coum	150	10/12	20	3-20
Galanthus nivalis	150	6+	20	3-20
Narcissus pseudonarcissus	150	7+	20	3-20

notes:
A. all perennials and bulbs to be planted in naturalistic drifts
B. all perennials and bulbs to be planted in grouping numbers suitable for the species (as indicated above)

C3 EP 24.04.14 GB FOR CONSTRUCTION
C2 EP 04.03.14 GB FOR CONSTRUCTION
C1 NU 20.02.14 GB FOR CONSTRUCTION
P1 NU 20.02.14 GB PRELIMINARY ISSUE
REV BY DATE CHK DESCRIPTION

STATUS

FOR CONSTRUCTION.

CONTRACTOR

MANSELL

PROJECT

DAVIS LANE SCHOOL

CLIENT

LB WALTHAM FOREST

DRAWING TITLE

PLANTING PLAN

DATE CREATED 25.04.14	DATE AMENDED 25.04.14	SCALE 1:200@A1
DRAWN BY GB	AMENDED BY GBAILEY	CHECKED GB

DRAWING NO & REVISION
12450_90_03-C3

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sprunt.

Tree Key

Implementation - New Trees to be planted by Mansell

Perennial/bulb Mix:
100no. Anemone nemorosa
20no. Asilbe superba
50no. Brunnera macrophylla
100no. Cyclamen coum
50no. Dryopteris filix-mas
100no. Galanthus nivalis
200no. Galium odoratum
100no. Narcissus pseudonarcissus
30no. Primula floribunda
50no. Waldsteinia ternata

Aquatic Marginal Mix (49m2):
15no. Acorus calamus 'Variegata'
20no. Butomus umbellatus
20no. Callitriche palustris
15no. Iris innominata
15no. Iris pseudacorus
20no. Mentha aquatica
20no. Ranunculus lingua
15no. Typha minima
Woodland understorey
Meadow Mix - 130m2

6no. Nymphaea alba

Native hedge mix (30m2)
6no. Acer campestre
4no. Cornus sanguinea
9no. Corylus Kent Cob
135no. Crataegus monogyna
4no. Prunus padus
16no. Prunus spinosa
6no. Rosa canina

Mixed thornless hedge (7m2):
3no. Acer campestre
21no. Prunus cerasifera
16no. Prunus domestica
2no. Rubus fruticosus (thornless variety)
2no. Viburnum opulus

Native hedge mix (42m2)
8no. Acer campestre
5no. Cornus sanguinea
13no. Corylus Kent Cob
189no. Crataegus monogyna
5no. Prunus padus
25no. Prunus spinosa
8no. Rosa canina

native hedge mix (24m2)
5no. Acer campestre
3no. Cornus sanguinea
7no. Corylus Kent Cob
108no. Crataegus monogyna
3no. Prunus padus
14no. Prunus spinosa
5no. Rosa canina

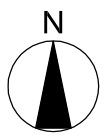
native hedge mix (39m2)
7no. Acer campestre
5no. Cornus sanguinea
12no. Corylus Kent Cob
175no. Crataegus monogyna
5no. Prunus padus
23no. Prunus spinosa
7no. Rosa canina

ornamental shrub mix (54m2)
23no. Choisya ternata
23no. Hydrangea paniculata 'Grandiflora'
40no. Lavandula angustifolia 'Hidcoté'
31no. Pieris japonica 'Mountain Fire'
23no. Ribes sanguineum
31no. Spiraea arguta 'Bridal Wreath'
23no. Viburnum opulus

Perennial/bulb Mix (18m2):
18no. Achillea 'Coronation Gold'
11no. Calamagrostis x acutiflora 'Karl Foerster'
30no. Festuca glauca 'Elijah Blue'
4no. Miscanthus sinensis
30no. Stipa arundinacea
20no. Allium christophii
50no. Anemone nemorosa
50no. Cyclamen coum
50no. Galanthus nivalis
50no. Narcissus pseudonarcissus

Native hedge mix (53m2)
9no. Acer campestre
6no. Cornus sanguinea
6no. Corylus Kent Cob
238no. Crataegus monogyna
6no. Prunus padus
32no. Prunus spinosa
9no. Rosa canina

Mixed thornless hedge (20m2):
6no. Acer campestre
60no. Prunus cerasifera
50no. Prunus domestica
2no. Rubus fruticosus (thornless variety)
3no. Viburnum opulus



KEY

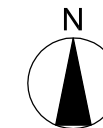
Existing tree retained

Existing tree removed

Existing tree retained
with tree works.
(canopy lift, crown
reduction dead
wooding etc.)

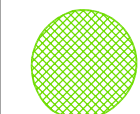
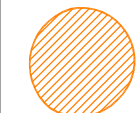


New tree
(to be planted by Contractor
Refer to DWG 12450_90_03
for species)

C3	EP 17.04.14	GB	ADDITIONAL SCREEN PLANTING
C2	EP 03.04.14	GB	SPECIFIC TIMINGS ADDED
C1	NU 20.02.14	GB	CONSTRUCTION ISSUE
REV BY	DATE	CHK	DESCRIPTION
STATUS			
CONSTRUCTION			
CONTRACTOR			
MANSELL			
PROJECT			
Davies Lane Primary School			
CLIENT			
LB Waltham Forest			
DRAWING TITLE			
Tree Strategy: Implementation by DEC 14			
DATE CREATED	DATE AMENDED	SCALE	
24.04.14	24.04.14	1:250 @ A3	
DRAWN BY	AMENDED BY	CHECKED	
NUDAL	GRAHAM	GBAILEY	
DRAWING NO & REVISION			
12450_90_05-C3			



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KEY

-  Existing tree retained
-  Existing tree removed
-  New tree planting to have formative pruning removing lower branches and breaks so as to encourage vertical growth and improve light penetration below the canopy.
-  New tree planting by others December 2016 (refer to DWG 12450_90_09 for species)

NOTE*

All Trees to be inspected for disease, damage or maintenance requirements. Any necessary additional maintenance to be completed as part of the pruning works. Any dead or diseased trees to be removed and replanted in the next growing season.

C3 EP 24.04.14 GB UPDATED TREE PLAN
C2 EP 04.03.14 GB SPECIFIC TIMINGSG ADDED
C1 NU 20.02.14 GB CONSTRUCTION ISSUE
REV BY DATE CHK DESCRIPTION

STATUS

CONSTRUCTION

CONTRACTOR

MANSELL

PROJECT

Davies Lane Primary School

CLIENT

LB Waltham Forest

DRAWING TITLE

**Tree Strategy:
Year 2 by DEC 16**

DATE CREATED 24.04.14	DATE AMENDED 24.04.14	SCALE 1:250 @ A3
DRAWN BY NUDAL	AMENDED BY GRAHAM	CHECKED GBAILEY

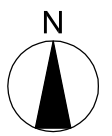
DRAWING NO & REVISION

12450_90_06-C3

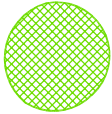


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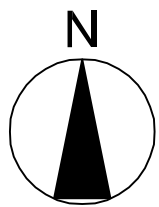


KEY

-  Existing tree retained
-  Existing tree removed
-  New trees requiring formative pruning, removal of tree stakes and ties. Any dead, diseased or significantly damaged trees to be removed and replaced in the next planting season.

NOTE*
All existing trees to be inspected as part of new planting maintenance works. Any issues defects or works to be identified and carried out as part of the works. All timber sections greater than 100mmØ to be cut and stock piled on site in habitat piles.

C3 EP 24.04.14 GB UPDATED TREE PLAN		
C2 EP 04.03.14 GB SPECIFIC TIMINGS ADDED		
C1 NU 20.02.14 GB CONSTRUCTION ISSUE		
REV BY	DATE	CHK DESCRIPTION
STATUS		
CONSTRUCTION		
CONTRACTOR		
MANSELL		
PROJECT		
DAVIES LANE PRIMARY SCHOOL		
CLIENT		
LB WALTHAM FOREST		
DRAWING TITLE		
TREE STRATEGY		
Phase 3 - YEAR 5 by DEC19		
DATE CREATED	DATE AMENDED	SCALE
24.04.14	24.04.14	1:250@A3
DRAWN BY	AMENDED BY	CHECKED
GB	GRAHAM	GB
DRAWING NO & REVISION		
12450_90_07-C3		




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PROJECT: Daves Lane Primary School
JOB NUMBER: 12450

	Quantity	Root protection	Density (m)	Form	Age/Condition	Height(cm)	Min. no. branches	Girth(cm)	Clear stem(cm)
TREES									
planted by School									
<i>Alnus glutinosa</i> (Alder)	2	RB	as shown	mi-mature Stand	4x	425-600	-	20-25	min 200
<i>Amelanchier lamarckii</i>	3	RB	as shown	tra heavy standa	3x	425-600	5	14-16	min 200
<i>Betula pendula</i> (Birch)	15	RB	as shown	Multi-stem	3x	300-350	3 stems	-	-
<i>Crataegus laevigata</i> 'Paul's Scarlet' (Hawthorn)	1	RB	as shown	tra heavy standa	3x	425-600	5	14-16	175-200
<i>Prunus avium</i> Plena (Cherry)	3	RB	as shown	tra heavy standa	3x	425-600	5	14-16	175-200
<i>Tilia cordata</i> 'Rancho' (Small leaved Lime)	6	RB	as shown	tra heavy standa	3x	min 450	5	18-20	min 200

Tree Key

 New Trees to be planted by other

5no. *Tilia cordata* 'Rancho'

1no. *Tilia cordata* 'Rancho'

3no. *Amelanchier lamarckii*

1no. *Alnus glutinosa*

2no. *Betula pendula*

6no. *Betula pendula*

1no. *Alnus glutinosa*

4no. *Betula pendula*

3no. *Betula pendula*

1no. *Prunus avium*

1no. *Crataegus laevigata*

2no. *Prunus avium*

C1 EP 24.04.14 GB FOR PLANNING
REV BY DATE CHK DESCRIPTION

STATUS

FOR PLANNING

CONTRACTOR

MANSELL

PROJECT

DAVIS LANE SCHOOL

CLIENT

LB WALTHAM FOREST

DRAWING TITLE

TREE PLANTING TO BE COMPLETED
BY SCHOOL (DEC 2015)

DATE CREATED 25.04.14	DATE AMENDED 25.04.14	SCALE 1:200@A1
DRAWN BY GB	AMENDED BY GBAILEY	CHECKED GB

DRAWING NO & REVISION
12450_90_09-C1

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Appendix 2. Tree Works Schedule

12450 Davie Lane Tree Works Schedule

	Phase		
	Implementation by Dec 14	Year 2 by Dec 16	Year 5 by Dec 19
Existing Trees			
T 25 - Cherry	Existing tree removed		
T26 - Cherry	Existing tree removed		
T27 - Sycamore	Existing tree removed		
T28 - Field Maple	Existing tree removed		
T33 - Cherry	Existing tree removed		
T34 - Sycamore	Existing tree removed		
T35 - Sycamore	Existing tree removed		
T36 - Pride of India	Existing tree retained	Existing tree retained	Existing tree retained
T37 - Sycamore	Existing tree removed		
T38 - Sycamore	Existing tree removed		
T39 - Elm	Existing tree removed		
T40 - Sycamore	Existing tree removed		
T41 - Sycamore	Existing tree retained with tree works	Existing tree removed	
T42 - Sycamore	Existing tree retained with tree works		Existing tree removed
T43 - Laurel	Existing tree removed		
T44 - Plum	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T45 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T46 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T47 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T48 - Cypress	Existing tree removed		
T49 - Cypress	Existing tree removed		
T50 - Sycamore	Existing tree removed		
T51 - Oak	Existing tree removed		
T52 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T53 - Oak	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T54 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T55 - Sycamore	Existing tree retained with tree works	Existing tree retained	Existing tree retained
T56 - Cherry	Existing tree retained with tree works	Existing tree retained	Existing tree retained
G4.01-10 Cypress	Existing trees removed		
G4.11-12 Cypress	Existing trees removed		

	Phase	
	Implementation by Dec 14	Year 2 by Dec 15
New Trees		
17 new trees	New tree to be planted by Mansell	
Tilia cordata Rancho	3	
Prunus avium	5	
Quercus robur	1	
Pinus sylvestris	3	
Alnus glutinosa	1	
Ilex aquifolium	4	
35 new trees		New tree to be planted by School
Tilia cordata Rancho		6
Ilex aquifolium		4
Prunus avium		3
Crataegus laevigata		1
Pinus sylvestris		1
Betula pendula		15
Amelanchier lamarckii		3
Alnus glutinosa		2

Appendix 3. Planting schedules

PLANT SCHEDULE

PROJECT: Davies Lane Primary School

JOB NUMBER: 12450

	Quantity	Root protection	Density (m)	Form	Age/Condition	Height(cm)	Min. no. branches	Girth(cm)	Clear stem(cm)
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TREES

planted by Mansell

Alnus glutinosa (Alder)	1	RB	as shown	Semi-mature Standard	4x	425-600	-	20-25	min 200
Ilex aquifolium (Holly)	4	RB	as shown	-	4x	200-225	-	-	-
Pinus sylvestris (Scots Pine)	3	RB	as shown	Semi-mature Standard	7x	300-400	-	20-25	min 200
Prunus avium Plena (Cherry)	5	RB	as shown	Extra heavy standard	3x	425-600	5	14-16	175-200
Quercus robur (Oak)	1	RB	as shown	Semi-mature Standard	4x	425-600	-	20-25	min 200
Tilia cordata 'Rancho' (Small leaved Lime)	3	RB	as shown	Extra heavy standard	3x	min 450	5	18-20	min 200

	Quantity	Root protection	Density (cm)	Habit	Age/Condition	Height (cm)
--	----------	-----------------	--------------	-------	---------------	-------------

HEDGING

Thornless hedge mix:

Acer campestre (Maple) - 5%	9	B	33	Transplant	1+1	60-80
Prunus cerasifera (Cherry Plum) - 50%	81	B	33	Branched	0+2	60-80
Prunus domestica (Plum) - 40%	66	B	33	Transplant	1+1	60-80
Rubus fruticosus (thornless variety) - 2%	4	B	33	Transplant	1+1	60-80
Viburnum opulus (Guelder Rose) - 3%	5	B	33	Transplant	1+1	60-80

Native hedge mix:

Acer campestre (Maple) - 3%	35	B	33	Transplant	1+1	60-80
Cornus sanguinea (Dogwood) - 2%	23	B	33	Branched	1+2	60-80
Corylus Kent Cob (Hazel) - 5%	57	B	33	Branched	1+2	60-80
Crataegus monogyna (Hawthorn) - 75%	845	B	33	Transplant	1+1	60-80
Prunus padus (Bird Cherry) - 2%	23	B	33	Branched	0+2	60-80
Prunus spinosa (Blackthorn)- 10%	112	B	33	Branched	0+2	60-80
Rosa canina (Dog Rose)- 3%	35	B	33	Branched	1+1	60-80

notes:

A. bare root to be planted nov-mar, container grown plants to be used at other times

B. double row hedges to be planted 40cm apart in staggered rows

C. Hedge to be layed after 5-7 years

	Quantity	Root protection	Density (/m2)	Habit	Age/Condition	Height (cm)	Min. no. branches	Plant in groups of
--	----------	-----------------	---------------	-------	---------------	-------------	-------------------	--------------------

SHRUBS

Choisya ternata	23	C 3L	3	Branched	-	30-40	4	3-5
Hydrangea paniculata 'Grandiflora'	23	C 3L	3	Branched	-	30-40	3	3-5
Lavandula angustifolia 'Hidcote'	40	C 3L	5	Bushy	-	20-30	5	3-5
Pieris japonica 'Mountain Fire'	31	C 3L	4	Bushy	-	30-40	3	3-5
Ribes sanguineum	23	C 2L	3	Branched	-	40-60	3	3-5
Spiraea arguta 'Bridal Wreath'	31	C 2L	4	Bushy	-	30-40	4	3-5
Viburnum opulus	23	C 2L	3	Branched	-	40-60	3	3-5

	Quantity	Root protection	Density (/m2)	Plant in groups of
--	----------	-----------------	---------------	--------------------

PERENNIALS

Achillea 'Coronation Gold'	18	C 1.5-2L	5	1-3
Astilbe superba	20	C 1L	5	3-10
Brunnera macrophylla	50	C 1L	8	3-10
Calamagrostis x acutiflora 'Karl Foerster'	11	C 1.5-2L	3	1-3
Dryopteris filix-mas	50	C 1.5-2L	4	3-10
Gallium odoratum	200	C 1L	15	20+
Festuca glauca 'Elijah Blue'	30	C 1.5-2L	8	3-10
Miscanthus sinensis	4	C 1.5-2L	1	1
Stipa arundinacea	30	C 1.5-2L	8	1-3
Primula floribunda	30	C 1L	10	3-10
Waldsteinia ternata	50	C 1L	15	20+

Quantity

WILDFLOWER MEADOW

Woodland Meadow Mix	130m2
---------------------	-------

notes:

A. Planted in accordance with specification Q30

PROJECT: Davies Lane Primary School
JOB NUMBER: 12450

	Quantity	Root protection	Density (m)	Form	Age/Condition	Height(cm)	Min. no. branches	Girth(cm)	Clear stem(cm)
TREES									
planted by School									
Alnus glutinosa (Alder)	2	RB	as shown	mi-mature Stand	4x	425-600	-	20-25	min 200
Amelanchier lamarckii	3	RB	as shown	tra heavy standa	3x	425-600	5	14-16	min 200
Betula pendula (Birch)	15	RB	as shown	Multi-stem	3x	300-350	3 stems	-	-
Crataegus laevigata 'Paul's Scarlet' (Hawthorn)	1	RB	as shown	tra heavy standa	3x	425-600	5	14-16	175-200
Prunus avium Plena (Cherry)	3	RB	as shown	tra heavy standa	3x	425-600	5	14-16	175-200
Tilia cordata 'Rancho' (Small leaved Lime)	6	RB	as shown	tra heavy standa	3x	min 450	5	18-20	min 200