

**LANDSCAPE MANAGEMENT PLAN**

**for**

**BUNKERS HILL, OXFORDSHIRE**

Prepared for

**KEBLE HOMES**

by

**ADAMS HABERMEHL Ltd**

*Environmental Design*

41 The Green

Steventon

Oxfordshire

OX13 6RR

Tel: 01235 799186

7.3.2019

Rev A : 18.9.19

Ref:e/pj/0753/manplan.doc

## **1.0 INTRODUCTION AND CONTEXT**

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### **1.1 LOCATION**

- 1.1.1 The site is to be developed by Keble Homes and is located at Bunkers Hill, Oxfordshire.

### **1.2 BACKGROUND TO THE MANAGEMENT PLAN**

- 1.2.1 The site is being developed for housing. Proposals include the implementation of soft landscape works together with maintenance and defects liability periods of 1 year for all planting types and grass areas.
- 1.2.2 The purpose of this management plan is to identify the long term landscape objectives and management requirements of the site beyond the initial contract planting and maintenance periods, in order to ensure the proper development of the landscape.

### **1.3 DESCRIPTION OF THE WORKS**

- 1.3.1 Maintenance and management operations will cover:
- Proposed trees
  - Proposed shrub and groundcover areas
  - Proposed hedges
  - Proposed wildflower areas
  - Proposed grass areas
  - Watering
  - Litter picking

### **1.4 DRAWINGS**

- 1.4.1 The contract drawings which identify the landscape works are as follows:
- 0753 1.1 Planting Plan (Sheet 1)  
0753 1.2 Planting Plan (Sheet 2)
- 1.4.2 A3 reductions (not to scale) of the plans are bound into this report (Ref. Appendix. 1).

### **1.5 FREQUENCY OF MAINTENANCE VISITS**

- 1.5.1 The Contractor is to visit the site as many times as is necessary to keep the works in good order. Visits between April - October are to allow for grass cutting, weeding of all areas, general maintenance of trees and shrubs, litter picking etc. as specified. Visits from December - March are to allow for general maintenance of trees and shrubs, litter picking, grass cutting if required, etc. as specified. The minimum number and dates of visits required shall be agreed with the

Management Company. The following, however, is an approximate guide to the number of visits the Contractor is expected to make:

January	1
February	1
March	1
April	2+
May	3+
June	4+
July	4+
August	3+
September	3+
October	2
November	1
December	1

## **1.6 ENVIRONMENTAL ISSUES**

- 1.6.1 The Management Company is to ensure that all green waste is recycled.
- 1.6.2 At no time during the period of the Management Plan are peat or limestone to be used. Peat substitutes such as mushroom compost or equal are acceptable.
- 1.6.3 Herbicide use is to be kept to a minimum, except where specified.
- 1.6.4 The Management Company shall seek to promote and enhance biodiversity.

## **1.7 MANAGEMENT RESPONSIBILITIES**

- 1.7.1 After the first year's maintenance and defects has been completed by the Landscape Contractor, under the terms of the contract, the long term management and maintenance of the landscape works will be undertaken by a Management Company appointed by Keble Homes. The period of the Management Plan is a minimum of 10 years.

## 2 THE MANAGEMENT PLAN

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### 2.1 MANAGEMENT CATEGORIES

2.1.1 This management plan sub-divides the landscape into different management categories (trees, shrubs, grass etc.) and generally applies management prescriptions to each category.

### 2.2 MANAGEMENT PRESCRIPTIONS

#### Proposed trees

#### 2.2.1 *Management objectives:*

- To promote the development of healthy specimen trees which will form an integral part of the structural landscape as well as forming attractive features in their own right.

#### 2.2.2 *Annual operations:*

Years 1-5:

- Keep tree pits clear of weeds;
- Adjust tree ties to ensure stem growth is not inhibited and that the bark is not chaffed or damaged;
- Check stakes and re-firm as necessary / replace if broken. Ensure that the support remains firm and trees remain vertical. Return trees to vertical where necessary;
- Re-firm soil around trees after frost or strong wind and break up any soil 'collars' at the base of tree trunks, refill with soil if required;
- Replenish mulch around the base of the trees as necessary to specified depths;
- Fertilise trees at years 3 and 5 by working 'Sierrablen Flora Yellow' into the soil, (not into the watering tube), at 20 cm depth around the drip line of the tree as tablets or in granular form in the following quantities:

Heavy standard trees	- 8 tablets/tree or 120grams granular;
Selected standard trees	- 7 tablets/tree or 105grams granular;
Standard trees	- 5 tablets/tree or 75grams granular;
- Continue regular watering operations up to and including establishment year 3. Inspect during establishment year 3. If tree is not showing signs of water stress and is making good extension growth, discontinue regular watering operations from end of year 3. If trees appear stressed or are not making extension growth, investigate cause and make recommendations to enhance tree establishment; continue watering if necessary;
- Prune trees annually to remove broken or crossing branches and to promote a well balanced and open crown. Remove any epicormic growth, suckers or deadwood;
- Replace any trees within 5 years of planting that have died or are dying with trees of the same species and original specification.

### 2.2.3 **Regular and intermittent operations:**

- Remove tree stakes at Year 3;
- Inspect all trees for pests and diseases and implement measures for their control or eradication;
- Undertake tree surgery as necessary. Inspect for storm damage or deadwood and carry out appropriate surgery to remedy. Prune younger trees to form a good shape, crown lift or crown reduce mature specimens if required to maintain good form and health.

## **Proposed shrub and groundcover areas**

### 2.2.4 **Management objectives:**

- To create colourful and varied ornamental planting that provides visual interest within the development;
- To promote the development of healthy, vigorous, well balanced multi-stemmed plants;
- To develop a continuous shrub / plant cover within beds to minimise weed growth.

### 2.2.5 **Annual operations:**

- All shrub beds to be hand weeded during each maintenance visit and maintained in a weed free condition;
- Maintain mulch to specified depths until shrubs and groundcovers have developed sufficiently to prevent weed growth;
- Replace any shrubs or groundcovers that have died with plants of the same species and original specification.

### 2.2.6 **Regular and intermittent operations**

- Re-firm shrubs following frost or high winds;
- Inspect planting to determine pruning requirements. Undertake all necessary pruning at the appropriate season to remove die back and deadwood, to promote the development of a strong framework, maintaining shape and balance, ensuring maximum amount of flowering wood is produced. Prune to maintain graded shrub areas. Where plants overlap hard surface areas and grass border edges, trim back long growths whilst maintaining the natural habit of the plant. *Cornus* spp. shall be cut back every two years to encourage new wood and stem colour;
- Visually inspect planting for adequate growth and fertiliser requirement. If necessary, apply Sierrablén Flora Yellow (granular) fertiliser prior to commencement of growth in the spring in years 4, 6, 8 & 10 (from the date of planting), and every two years thereafter, as a top dressing in all shrub and groundcover areas, at a rate of 70g/m<sup>2</sup>. Fertiliser shall be worked into the top 20cm of soil around each plant. In areas of mulch, the mulch shall be raked back prior to fertilising;
- Inspect all shrub planting for pests and diseases and implement measures for their control or eradication.

## **Proposed hedges**

### **2.2.7 Management objectives:**

- To create spatial and effective barriers along garden boundaries and in the LAP area;
- Hedges to be maintained to a height of 1.2m.

### **2.2.8 Annual operations:**

- Cut back the side and top growth of hedges as required to specified heights with close branching and a dense, regular and impenetrable form;
- Cut to an even, high quality finish with no residual snags or ragged edges. Remove cuttings from site;
- Keep base of hedge clean, tidy and free of weeds and litter;
- Replace any plants that have died and replant any gaps as necessary with component species to the same layout and density of the existing hedge.

### **2.2.9 Regular and intermittent operations:**

- Fertilise all hedges at years 3 and 5 by working 'Sierrablen Flora Yellow' into the surrounding soil at 20 cm depth, in granular form at 100 grams per linear metre. Inspect and fertilise as required from year 5 onwards;
- Inspect all hedges for pests and diseases and implement measures for their control or eradication.

## **Proposed wildflower areas**

### **2.2.10 Management objectives:**

- To improve habitat diversity by developing a species rich wildflower area within the grass areas.

### **2.2.11 Annual operations (after first year establishment)**

- If required cut in March/April to 50mm height to remove excess growth;
- Second cut after flowering in late July – August to 50mm height. Allow 'hay' to dry and shed seed (1-7 days) and then remove arisings from site;
- Cut again in late autumn to 50mm height to remove re-growth.

### **2.2.12 Regular and intermittent operations:**

- Spot treat as required and weed to remove pernicious perennial weeds such as couch grass, docks and nettles;
- Inspect wildflower areas for pests and diseases and implement measures for their control or eradication;
- Inspect for maintenance of species rich character. Where loss of diversity is noted, revise management, replant or undertake other measures to re-introduce species diversity in keeping with the original proposals.

**Proposed grass areas: Medium height sward - open space areas adjacent to wildflower areas**

**2.2.13 Management Objectives**

- To maintain a medium height sward between 50-75mm capable of withstanding wear.

**2.2.14 Annual operations:**

- The maintenance regime shall be implemented after the seeded areas have fully established;
- Cut as required (approximately 10-12 cuts/year) during the growing season using a rotary or flail mower to maintain the sward throughout the year at a height of between 50-75mm. The intervals between cuts shall be increased during drought periods;
- Heavily used areas shall be aerated at least once per year;
- All grass cutting shall be carried out with equipment that is properly maintained. The equipment shall have cutting edges that are sharp and properly set;
- All necessary precautions shall be taken to avoid damage to trees during cutting operations.

**2.2.15 Regular and intermittent operations:**

- Heavily used grass areas to be fertilised every five years or less as required;
- As and when necessary, the grass area shall be harrowed or raked to remove dead material, and the material removed off-site;
- Inspect all grass areas for pests and diseases and implement measures for their control or eradication.

**Proposed grass areas: Short sward - LAP area and remaining public grass areas along access road**

**2.2.16 Management objectives:**

- To maintain a short sward, between 25 and 30mm in height;
- To provide areas for informal use.

**2.2.17 Annual operations:**

- Cut grass approximately monthly during autumn / winter periods if required (fortnightly during autumn if necessary), and approximately every 7-10 days from April during the general growing season. Use a rotary or cylinder mower to maintain a sward to a height of 25-30mm. Remove cuttings from site. During periods of drought adjust the frequency of cuts accordingly;
- Prepare ground and overseed any bare or thin patches of grass.

**2.2.18 Regular and intermittent operations:**

- Grass areas, if heavily used, to be fertilised every five years or less as required, using a proprietary lawn feed;
- Inspect grass areas for compaction and aerate as required on an intermittent basis depending on use;

- Light dethatching to be carried out as and when required. Should thatch become a problem then scarification shall take place using a spring-tined rake or similar;
- Inspect all grass areas for pests and diseases and implement measures for their control or eradication.

## **Watering**

### **2.2.19 *Management objectives:***

- To ensure an adequate supply and application of water to ensure establishment and satisfactory growth of planting.

### **2.2.20 *Annual operations:***

- Inspect all planted areas and trees to ensure that planting is not stressed through lack of water. Where such stress is apparent, the Contractor shall water the affected trees and planting areas to field capacity. Subject to drought orders and hosepipe bans that may be in place inspect and water as appropriate at a minimum of 2 weekly intervals, and more frequently in periods of dry or hot weather.

## **Litter picking and dog bins**

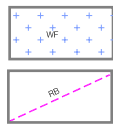
### **2.2.21 *Management objectives:***

- To maintain a tidy appearance through removal of litter and waste materials from site.

### **2.2.22 *Regular and intermittent operations:***

- Remove all litter from the site on each maintenance visit or more frequently as necessary to maintain the development free of litter;
- Empty all dog bins weekly.

## APPENDIX 1



PROPOSED WILDFLOWER AREAS  
EMORSGATE SEED MIX EM1  
SOWN AT 4g/m<sup>2</sup>

ROOT BARRIER  
GREENLEAF RE ROOT 2000

- NOTES
- ALL PLANT MATERIAL SHALL COMPLY WITH THE NATIONAL PLANT SPECIFICATION & BS 2836 (1990) NURSERY STOCK.
  - ALL SOFT LANDSCAPE WORKS & PLANTING SHALL COMPLY WITH BS 4428 (1989) 'LANDSCAPE OPERATIONS' BS 8545 (2014) 'TREES FROM NURSERY TO INDEPENDENCE IN THE LANDSCAPE' AND THE CPSE CODE FOR HANDLING AND ESTABLISHING PLANTS.
  - ALL SUBSOIL PRIOR TO RECEIVING TOPSOIL SHALL BE FREE OF COMPACTION AND SHALL BE FREE DRAINING.
  - ALL TOPSOIL SHALL MEET AS A MINIMUM BS 3882 (2007) MULTI PURPOSE GRADE. EXISTING TOPSOIL CULTIVATED TO BS 3882 (2007).
  - TOPSOIL MINIMUM DEPTHS: 300mm DEPTH IN SHRUB AREAS, 150mm DEPTH IN GRASS AREAS, SUBSOIL ONLY IN WILDFLOWER AREAS TOPSOIL GRADED TO FALL. NO CULTIVATION SHALL TAKE PLACE DURING WET OR WATERLOGGED CONDITIONS.
  - TREE PIT SIZES: 1.0X1.0X0.9m DEPTH. BASE OF PIT BROKEN UP TO ENSURE FREE DRAINAGE.
  - TREE PITS TO BE BACKFILLED WITH 5 PARTS TOPSOIL AND 1 PART ORGANIC COMPOST. TREES TO BE CENTRALLY PLANTED IN PITS.
  - ALL TREES TO BE DOUBLE STAKED - STAKES 1800mm LONG, 75mm DIA., 450mm ABOVE GROUND. CROSS PIECES 400X100X25mm. TREES TIED TO CROSS PIECES WITH TONS FLAT BACKED PADS & 37mm WEBBING.
  - WATERING AND AERATION PIPE (75mm PERFORATED PLASTIC PIPE WITH CAP) TO BE PLACED AROUND ROOTBALL AND EXTENDED TO SURFACE. CAPPED AND COVERED WITH MULCH.
  - CONTAINER GROWN SHRUBS PLANTED IN PITS 300X300X300mm DEPTH. BACKFILL SHALL INCLUDE 3 LITRES OF PEAT FREE TREE AND SHRUB COMPOST.
  - SERRABLEN SLOW RELEASE 15cm TABLETS TO BE INCORPORATED INTO TOP 20cm OF BACKFILL IN TREE AND SHRUB PITS
  - HEAVY STANDARDS - 8 TABLETS/TREE. SELECTED STANDARDS - 7 TABLETS/TREE. STANDARDS - 6 TABLETS/TREE.
  - SHRUBS: 3L - 2 TABLETS/SHRUB. 2L - 1 TABLET/PLANT
- (ELUXE RANGE). SOURCE: MELCOURT INDUSTRIES

SEED AT SPECIFIED RATES.

- TREE POSITIONS: BASED UPON FOUNDATIONS THAT EXTEND DOWN INTO LIMESTONE (NON SHRINKABLE) AT BETWEEN 1.0-1.4m DEPTHS.

Rev	Date	Rev
C	20.9.19	Minor amend to tree and hedge species
B	15.9.19	LAP: Bb moved, gates adjusted
A	15.7.19	LAP adjusted

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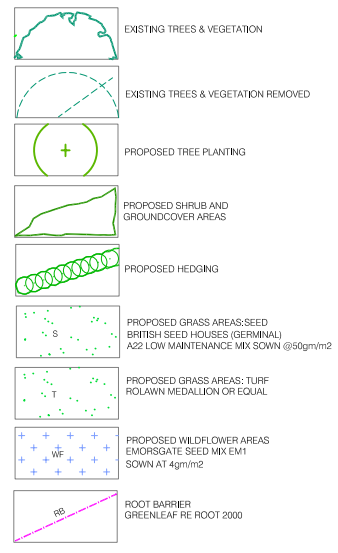
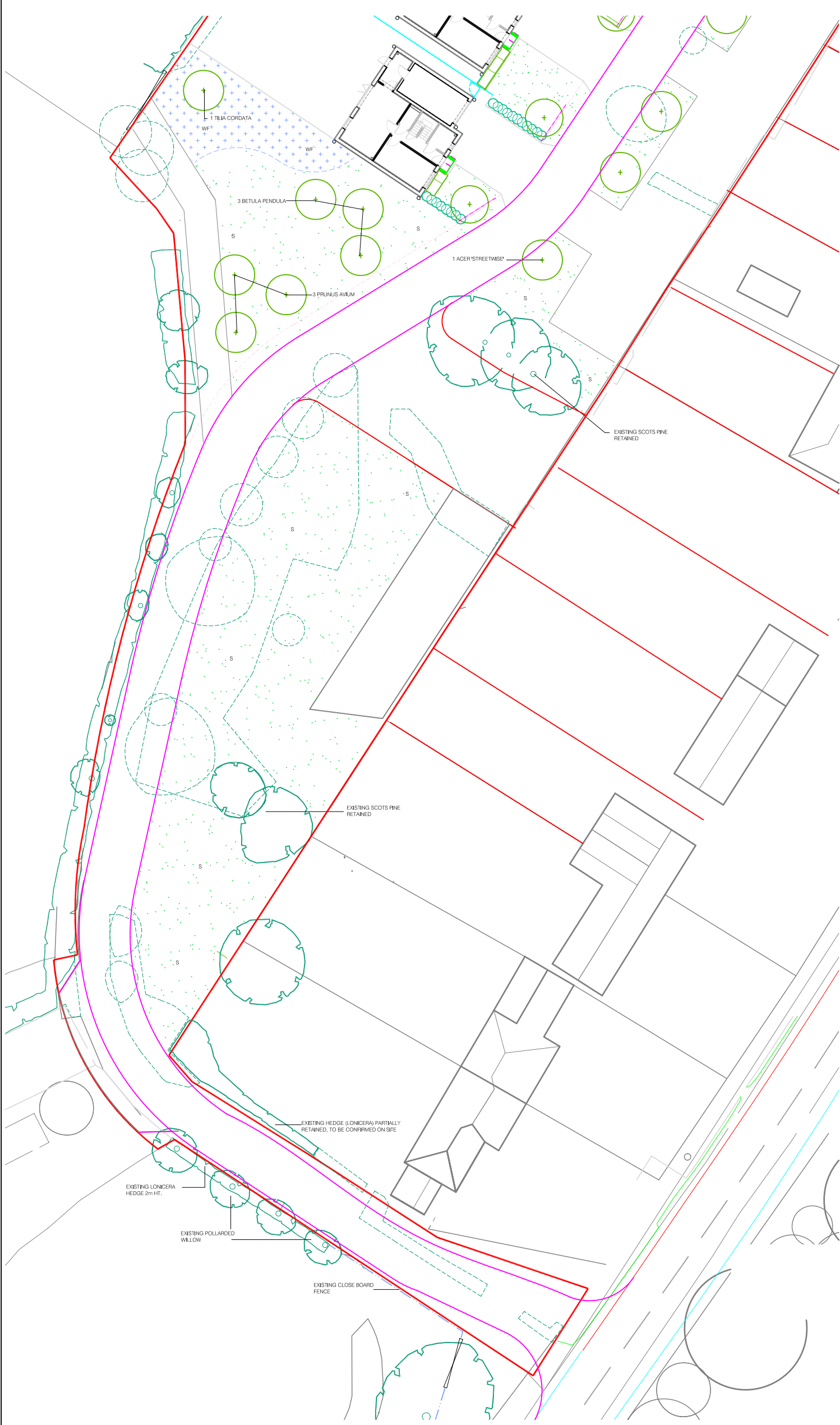
**Project**  
 BUNKEES HILL

**Client**  
 KEBLE HOMES

**Project No**  
 PLANTING PLAN (SHEET 1)

<b>Client's Ref No</b>	<b>Project Ref No</b>
0753 1.1	C
<b>Scale</b>	<b>Date</b>
1:200 @ A1	7.3.2019
<b>Client's Ref No</b>	<b>Project Ref No</b>

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SPECIES	Sheet 1	Sheet 2	Total	POT SIZE/GIRTH	HEIGHT	CLEAR STEM / MIN NO OF BREAKS	SPACING
<b>TREES</b>							
ACER CAMPESTRE 'STREETWISE'	12	1	13	10-12cm g SS RB	3.0-3.5m	1.75-2.0m	As shown
BETULA PENDULA	3	3	6	10-12cm g SS RB	3.0-3.5m	1.75-2.0m	As shown
MALUS 'EVERESTE'	10		10	12-14cm g HS RB	3.5-4.25m	1.75-2.0m	As shown
PRUNUS AVIUM	3	3	6	8-10cm g ST RB	2.5-3.0m	1.75-2.0m	As shown
TILIA CORDATA	1	1	2	8-10cm g ST RB	2.5-3.0m	1.75-2.0m	As shown
<b>HS - Heavy Standard SS - Selected Standard ST - Standard RB - Rootballed</b>							
<b>HEDGING</b>							
ESCALONIA 'CRIMSON SPIRE'	94		94	3L	40-60cm	Bushy 4	400mm cs
OSMANTHUS X BURKWOODII	128		128	3L	30-40cm	Bushy 4	400mm cs
VIBURNUM TINUS 'EVE PRICE'	106		106	3L	30-40cm	Bushy 4	450mm cs
<b>SHRUBS</b>							
BUDDLEIA 'LOCHING'	4		4	3L	40-60cm	Branched 4	4/m2
CISTUS CORBARENSIS	35		35	3L	30-40cm	Bushy 4	4/m2
CISTUS 'SILVER PINK'	21		21	3L	30-40cm	Bushy 4	4/m2
CISTUS 'SUNSET'	16		16	3L	30-40cm	Bushy 4	4/m2
CORNUS ALBA SIBIRICA 'VARIEGATA'	31		31	3L	40-60cm	Branched 4	4/m2
HEBE 'MIDSUMMER BEAUTY'	10		10	3L	30-40cm	Bushy 5	4/m2
HEBE 'MRS WINDY'	15		15	3L	30-40cm	Bushy 5	4/m2
HEBE RAVENNENSIS	11		11	3L	20-30cm	Bushy 5	4/m2
HEBE 'RED EDGE'	9		9	3L	20-30cm (D)	Bushy 5	4/m2
LAVANDULA 'MIDCOTE'	37		37	2L	15-20cm	Bushy 5	350mm cs
LONICERA 'MAGGREEN'	27		27	3L	30-40cm (D)	Bushy 6	4/m2
MAHONIA 'APOLLO'	13		13	3L	30-40cm	Branched 3	4/m2
PRUNUS ZABELIANA	31		31	3L	30-40cm (D)	Bushy 3	4/m2
RIBES 'PULBOROUGH SCARLET'	4		4	4L	60-80cm	Branched 3	3/m2
ROSA 'KENT'	10		10	3L	30-40cm	Strong bush	4/m2
ROSMARINUS 'SEVERN SEA'	10		10	3L	30-40cm	Bushy 6	4/m2
SALVA ICTERINA	35		35	2L	20-30cm	Branched 3	400mm cs
SALVA PURPURESCENS	12		12	3L	20-30cm	Branched 5	4/m2
SARCOCOCCA CONFUSA	6		6	3L	20-30cm	Bushy 6	4/m2
SKIMMIA CONFUSA 'KEW GREEN'	8		8	3L	30-40cm	Bushy 3	4/m2
SPIRAEA 'YRRELIGHT'	27		27	3L	40-60cm	Bushy 6	4/m2

**NOTES**

- ALL PLANT MATERIAL SHALL COMPLY WITH THE NATIONAL PLANT SPECIFICATION & BS 2826 (1992) NURSERY STOCK.
- ALL SOFT LANDSCAPE WORKS & PLANTING SHALL COMPLY WITH BS 4428 (1989) 'LANDSCAPE OPERATIONS', BS 6545 (2014) 'TREES FROM NURSERY TO INDEPENDENCE IN THE LANDSCAPE', AND THE CPSE CODE FOR HANDLING AND ESTABLISHING PLANTS.
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- TOPSOIL GRADED TO FALL. NO CULTIVATION SHALL TAKE PLACE DURING WET OR WATERLOGGED CONDITIONS.
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- HEAVY STANDARDS - 8 TABLETS/TREE. SELECTED STANDARDS - 7 TABLETS/TREE. STANDARDS - 5 TABLETS/TREE. SHRUBS: 3L - 2 TABLETS/SHRUB 2L - 1 TABLET/PLANT
- ALL SHRUB AND GROUND COVER AREAS TO BE MULCHED WITH 75mm DEPTH OF ORNAMENTAL BARK MULCH (DELUXE RANGE), SOURCE: MELCOURT INDUSTRIES
- CONTRACTOR TO CONFIRM LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO UNDERTAKING LANDSCAPE WORKS. TO COMPLY WITH BRITISH STANDARDS. TREES WITH A STEM DIAMETER AT 1.5m HT. ABOVE G.L. OF 300mm AND >60cm (AT MATURITY) TO BE A MINIMUM OF 1.5 & 3m AWAY FROM SERVICES RESPECTIVELY. ROOT BARRIER (GREENLEAF RE-ROOT 2000) TO BE INCORPORATED WHERE TREES ARE LESS THAN SPECIFIED DISTANCE AWAY FROM SERVICES. DEPTH TO EXTEND TO A MINIMUM OF 300mm BELOW ADJACENT SERVICES.
- GRASS, TURF AND SEED AREAS: REMOVE ANY RESIDUAL BANK WEEED GROWTH. CULTIVATE AND LEVEL AS REQUIRED TO REMOVE ANY STONES OR GENERAL WASTE. SOIL CULTIVATED TO A FINE TILT PRIOR TO TURFING AND SEEDING. TURF Laid TO STRETCHER BOND & JOINTS FILLED WITH TOPSOIL. SEED AT SPECIFIED RATES.
- TREE POSITIONS: BASED UPON FOUNDATIONS THAT EXTEND DOWN INTO LIMESTONE (NON SHRINKABLE) AT BETWEEN 1.0-1.4m DEPTHS.

Rev	Date	Notes
C	20.10.19	Plant schedule
B	18.10.19	Planting at entrance omitted
A	15.7.19	Access track and entrance modified

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**Client:** BUNNERS HILL  
**Site:** KEBLE HOMES  
**Project:** PLANTING PLAN (SHEET 2)

Drawn by:	0753 1.2	Checked by:	C
Date:	7.3.2019	Scale:	NA
Project No:	10/2000/01	Client:	NA