

**Proposed residential development on
Land at Boozey Fields - Gwersyllt - Wrexham**

The Ark Company Landscape Architects

Landscape Management Plan (v1.2)

1.0 Introduction

- 1.1** The Ark Company Landscape Architects were instructed by Gower Homes Ltd. in January 2018 to prepare the following Landscape Management Plan for an approved residential development on land at Boozey Fields, Gwersyllt, Wrexham. The purpose of the plan is to ensure that existing and new landscape features are protected, maintained and nurtured for the duration of the proposed development achieving, so far as possible, a mature, relatively self-sustaining landscape with only limited necessary annual inputs to ensure health, vigour and sustained visual amenity value.

2.0 Proposed landscape features

- 2.1** The proposed development (refer to **drawing 05/115/07 v1.5**) comprises a mix of housing, roads, and associated hard and soft landscape elements set within an enveloping framework of more mature existing landscape features to be retained and protected during developed and then maintained with new features as set out below. The working boundary for landscape management, (excluding adopted roads and footways) is provided (**Drawing 05/115/09 v1.5**) but reference will also need to be made to the original landscape planning and implementation drawings as noted below reduced copies of which are embedded into the appendices. Land within private ownership will be the responsibility of residents and thereby excluded from the plan unless it abuts features of wider significance such as boundary hedgerows and trees.
- 2.2** Existing landscape features primarily comprise mature / semi-mature boundary trees and hedgerows. Existing internal grassland areas will largely be lost or disturbed during development works.
- 2.3** New hard landscape features (excluding adopted roads / paths and features within private curtilages) will include communal driveways, parking areas, amenity pathways / cycle routes and reinforced grass access tracks. Boundary elements (refer to **dwg.08** – boundaries & finishes) with outward facing sides include 1.8m brick walls to rear gardens, 1.8m timber panel fences to rear gardens, 1200mm chestnut pale fencing to new buffer strip hedgerows and timber knee rails to some access road frontages.
- 2.4** New soft landscape features (excluding those within private curtilages) will include new tree, shrub and perennial planting, native hedgerows, amenity grassland areas, wildflower grassland areas, reinforced grass access strips,
- 2.5** Abnormal site-specific landscape features requiring consideration include landscape buffer strips to areas existing boundary trees which will abut private curtilages in places, a service easement across private gardens and public open space areas overlying underground water storage infrastructure.
- 2.6** There are no Public Rights of Way running across the site however there are proposed foot / cycle routes across public open space areas for communal use to the eastern and western ends of the site. Three open space areas will be provided but no play areas / play equipment.

3.0 Hard Landscape Management

- 3.1 **Adopted roads and footways** together with parking areas and paths within private ownership will be maintained by others and do not form part of the Landscape Management Plan.
- 3.2 **Communal driveways, parking areas, amenity pathways / cycle routes and reinforced grass access** will need to be kept litter free throughout the year and fallen leaves collected and removed in the Autumn. Surface construction should be regularly monitored and promptly reinstated or reported in the event of significant defects, failures or excessive wear occurring.
- 3.3 **Grass reinforcement** should be regularly monitored and promptly reinstated or reported in the event of significant defects, failures or excessive wear occurring. Badly eroded or failing grass areas should be over-seeded in Spring or Autumn and maintained to ensure satisfactory re-establishment
- 3.4 **1.8m brick walls** to rear gardens should not require active maintenance but should be routinely inspected, particularly after periods of high winds or frost, and promptly reinstated or reported in the event of significant defects, failures, excessive wear or vandalism occurring.
- 3.5 **1.8m timber panel fences** to rear gardens should regularly monitored, particularly after periods of high winds, and promptly reinstated in the event of significant defects, failures, excessive wear or vandalism occurring. Significant areas of rot should be cut out and replaced as necessary to ensure posts and panels remain safe and functional at all times.
- 3.6 **1200mm chestnut pale fencing** to new buffer strip hedgerows should be retained and maintained as necessary until hedgerow plants have adequately grown and knitted together to form an effective barrier at which time fencing may be removed and disposed of off-site. Chestnut pale fencing should be routinely inspected, particularly after periods of high winds, and promptly reinstated in the event of significant defects, failures, excessive wear or vandalism occurring.
- 3.7 **Timber knee rails** to some access road frontages should regularly monitored and promptly reinstated in the event of significant defects, failures, excessive wear or vandalism occurring. Significant areas of rot should be cut out and replaced as necessary to ensure posts and rails remain safe and functional at all times.

4.0 Soft Landscape Management

- 4.1** Soft landscape areas, finishes and establishment are set out on drawings 05/117/04 to 06 copies of which should be retained for reference at all times. Establishment operations are set out on drawing 04 to ensure new planting develops satisfactorily into and established soft landscape harmonious with existing landscape features around the site boundaries. During and beyond this stage, for the lifetime of the development, the whole of the soft landscape should be managed as set out below, monthly operations will vary according to season and are set out in the following schedule of annual operations.
- 4.2** Existing mature / semi-mature trees (refer to tree survey schedule at **Appendix 1**) should be inspected twice annually in Spring and Autumn for signs of damage or decay, in the event of a significant defect a qualified arborist should be appointed to undertake a tree specific survey and action taken according to the resulting report. In the event of serious damage or health issues to prominent or visually significant trees, trees within Conservation Areas or trees covered by a TPO the report should be passed to the County tree officers for their information and comment **prior** to any action being taken unless public safety is an over-riding concern in which case comment should be sought as soon as possible and only the minimum necessary work done to make the tree / trees safe. Implementation programmes for any necessary tree work are to comply with the current British Standard BS-3998 'Recommendations for tree work'.
- 4.3** Existing mature hedgerows should be kept clear of litter, weed free and flail cut once annually to a traditional flat top 'A' shape with any gaps infilled with new planting based on the new native hedge mix provided on **dwg.04** planted at the sizes / spacings as scheduled.
- 4.4** Newly established tree planting should be kept weed free and regularly monitored. By the end of Year 3 following planting any remaining tree stakes, tree ties, tree / shrub shelters and stakes, rabbit spiral guards and canes should be removed. Regular checks should be made to ensure trees remain firmly bedded in with any damaged / diseased branches lightly pruned to maintain health and form. Formative pruning of new trees may be required, where appropriate, including progressive crown lifting, leader selection, and minimum / maximum heights of crown lifting. Irrigate as and when necessary as noted on dwg.04. Trees in open grassland are to be kept free of weeds and grass through the provision of a 1.0m radius mulch ring laid to an approximate depth of 80mm of partially degraded wood mulch to be topped up or replaced on an annual basis. Cutting / strimming within this zone will not be allowed.
- 4.5** Newly established native hedgerows should be kept clear of litter, weed free and pruned / flail cut once annually to a traditional flat top 'A' shape with any gaps infilled with replacement planting based on the new native hedge mix provided on dwg.04 planted as specified at the sizes / spacings as scheduled. Irrigate as and when necessary as noted on dwg.04.
- 4.6** Newly established semi-natural shrub planting should be kept clear of litter, weed free and pruned annually to maintain overall form and vigour. Significant gaps should be infilled with replacement planting with reference to dwg.04 planted as specified at the sizes / spacings as scheduled. Irrigate as and when necessary as noted on dwg.04.

- 4.7** Newly established amenity shrub and perennial planting should be kept clear of litter, weed free and pruned annually to maintain overall form and vigour. Significant gaps should be infilled with replacement planting with reference to dwg.04 planted as specified at the sizes / spacings as scheduled. Amenity shrub bed mulch should be topped up annually to minimum 50mm depth. Irrigate as and when agreed.
- 4.8** Newly established amenity grassland areas should be kept clear of litter, weed and leaf free and cut regularly (allow max 2 cuts per month) during the active growing season to maintain health and amenity value. Following cutting blown grass clippings should be swept / blown off adjacent hard-surface areas as necessary. Failed or worn areas should be reinstated by over-seeding with a comparable low maintenance amenity mix and established with reference to dwg.04. Irrigate as and when necessary as noted on dwg.04. Remove leaves once or twice monthly, as required, in the Autumn.
- 4.9** Newly established wildflower grassland areas should be kept clear of litter, weed and leaf free and cut twice annually (strimmed or flailed according to accessibility) in May and September with all cuttings removed off site. Failed or worn areas should be reinstated by over-seeding with a comparable low maintenance wildflower mix and established with reference to dwg.04. Irrigate as and when agreed. Remove leaves once or twice monthly, as required, in the Autumn.
- 4.10** Irrigation generally is to be in accordance with BS 8545 2014 Trees from Nursery to Independence. The need for any irrigation during periods of drought stress is to be monitored and reported for prior approval and instruction.

Boozey Fields Landscape Management Plan – annual schedule of operations												
Operations	J	F	M	A	M	J	J	A	S	O	N	D
Generally												
Allow for one joint site inspection annually in March												
Allow for routine monitoring for abnormal wear, failure or vandalism to hard and soft landscape features requiring action to reinstate or report as described												
Irrigation (subject to reporting and instruction)												
Roads, drives, footways and cycle-paths												
Keep clear, tidy and free of all litter monthly												
Remove leaves once monthly												
Reinforced grass areas												
Keep clear, tidy and free of all litter monthly												
Remove leaves once monthly												
Reinstate worn or failed grass cover as required												
Walls, fences and knee rails												
Joint annual inspection before Autumn												

Operations	J	F	M	A	M	J	J	A	S	O	N	D
Mature and semi-mature existing trees												
Annual inspections in Spring and Autumn												
Mature existing hedgerows												
Keep clear, tidy and free of all litter												
Prune / trim once annually to a flat top "A" shape												
Spray out basal weed cover twice annually												
Newly established tree planting												
Check stakes, ties, shelters & guards 3 times / year												
Slow release fertilizer application once annually												
Lightly prune damaged / diseased branches												
Formative pruning to develop shape												
Irrigation (subject to reporting instruction)												
Newly established amenity planting												
Keep clear, tidy and free of litter monthly												
Prune annually in Autumn - spring effect planting												
Prune annually in Spring - winter effect planting												
Apply residual herbicide once annually												
Hand weed / spot treat 3 times annually												
Top up mulch to minimum 50mm depth once annually												
Apply slow release fertilizer once annually												
Clear, tidy and remove dead foliage – perennial areas												

Operations	J	F	M	A	M	J	J	A	S	O	N	D
Newly established semi-natural planting												
Keep clear, tidy and free of litter monthly												
Prune / coppice in Autumn - spring effect planting												
Prune/ coppice in Spring - winter effect planting												
Apply residual herbicide once annually												
Hand weed / spot treat 2 times annually												
Top up mulch to minimum 50mm depth once annually												
Apply slow release fertilizer once annually												
Newly established amenity grassland												
Keep clear, tidy and free of litter monthly												
Remove leaves once monthly												
Cut grass 1-2 times monthly and clean up cuttings												
Weed control – allow up to three applications												
Fertilizer application twice annually												
Make good / re-seed bare patches as required												
Ring weed 1m dia around amenity trees												
Newly established wildflower areas												
Keep clear, tidy and free of litter monthly												
Remove leaves once monthly												
Flail or strim twice annually and collect all arisings												
Hand weed / spot treat twice annually												

LANDSCAPE MANAGEMENT PLAN - APPENDIX 1 TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	BOOZEY FIELD, GRIFFITHS ROAD, WREXHAM	SURVEYOR:	A. HENDERSON
CLIENT:	GOWER HOMES LTD	ASSESSMENT DATE:	27/01/2015
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT	VIEWING CONDITIONS:	GOOD
		JOB REFERENCE:	14/AIA/XXM/142

TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T1	Oak	M	17 1E	6	6	7	7	910	M/G	- Dead wood in crown ≤60mm - lv clad stem impeding inspection - On road side verge & subject to TPO - E.R.C. 20+	• N/A	A2	10.9 375m²
T2	Sycamore	M	18 2N	6	5	5	6	740	G	- Small stem cavities to south at point of past limb removals - On raised earth embankment above road to south - Prominent tree with TPO - E.R.C. 40	• N/A	A2	8.9 248m²
T3	Oak	FM	21 2N	8.5	5	6.5	8	1280	G	- Large prominent tree with TPO - On raised embankment approx. 1m above road level - roots likely to spread below road, RPA unmodified - Dead wood in crown - E.R.C. 40	• Remove dead wood	A2	15 707m²

HEADINGS & ABBREVIATIONS

TREE NO.
SPECIES:
AGE RANGE/LIFE STAGE:
HEIGHT:
CROWN SPREAD:
CROWN CLEARANCE & DIRECTION OF GROWTH:
STEM DIA/MULTI-STEM DIA:
VITALITY:
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:
BS 5837 CATEGORY & SUB-CATEGORY GRADING:
BS 5837 RADIUS & BS 5837 RPA:

REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS. FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL, LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE - ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

LANDSCAPE MANAGEMENT PLAN - APPENDIX 1
TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	BOOZEY FIELD, GRIFFITHS ROAD, WREXHAM	SURVEYOR:	A. HENDERSON	
CLIENT:	GOWER HOMES LTD	ASSESSMENT DATE:	27/01/2015	PAGE 2 OF 5
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT	VIEWING CONDITIONS:	GOOD	
		JOB REFERENCE:	14/AIAWXXM/142	

TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)			STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W					
T4	Ash	EM	13 2.5N	6	4	4.5	5	580	M/P	- Self set tree, entirety Ivy clad impeding inspection - Poor crown form - bifurcates to 3 leaders from 3m - Easily replace by better quality specimen if required - E.R.C. 10+	C2	7 152m²
T5	Ash	EM	15 1N	6.5	4	5.5	5.5	590	M	- Entirely Ivy clad - No significant defects - E.R.C. 10+	C2	7.1 157m²
T6	Ash	M	16 1S	2.5	5	2.5	4	300 280 (410)	M	- Located outside northern boundary - Twin stem from base - no access to survey - Largest tree in group - E.R.C. ≤20	C2	4.9 76m²
T7	Ash	M	16 1S	5	5	3	5	400	M	- Entirely Ivy clad - Unable to access to accurately survey - E.R.C. ≤20	C2	4.8 72m²
T8	Oak	EM	16 2S	5	5	3	5	400	G	- Unable to access to accurately survey - Appears in good health and vigour - E.R.C. 20+	B2	4.8 72m²
T9	Sycamore	EM	15 1E	2	3	4	4	280	P	- Unable to access to accurately survey - Ivy clad self set tree of no value - E.R.C. 10	C2	3.4 35m²

LANDSCAPE MANAGEMENT PLAN - APPENDIX 1

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	BOOZEY FIELD, GRIFFITHS ROAD, WREXHAM	SURVEYOR:	A. HENDERSON
CLIENT:	GOWER HOMES LTD	ASSESSMENT DATE:	27/01/2015
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT	VIEWING CONDITIONS:	GOOD
		JOB REFERENCE:	14/AIA\WXXM\142

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TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
T10	Oak	M	14 1E	4.5	4.5	5	4	400 300 (500)	G	- Unable to access to accurately survey 2 stems, both recorded - Appears in good health and vigour - E.R.C. 20+	3rd party tree	B2	6 113m²
T11	Ash	FM	16 1S	4	5	4	5	500	G	- Within rear garden of residential dwelling on The Meadows outside northern boundary with no access to survey - Lowest limb over site in decline - E.R.C. 20	3rd party tree - Remove lowest limb over site back to boundary	B2	6 113m²
T12	Ash	FM	18 1.5S	5	8	7	7	400 360 400 (671)	G	- Within rear garden of residential dwelling on The Meadows outside northern boundary with no access to survey - Large prominent skyline tree with 3 main stems forming one closed canopy - E.R.C. 20	3rd party tree	A2	8 204m²
T13	Sycamore	M	16 5W	5	5	5	5	600	G	- Within rear garden of residential dwelling on The Meadows outside northern boundary with no access to survey - ly clad - E.R.C. 20	3rd party tree	B2	7.2 163m²
T14	Ash	EM	13 2N	3.5	3.5	3.5	3.5	210x 2 (297)	M	- Small insignificant tree with co-dominant stems from 1m - E.R.C. 10	Remove to accommodate new boundary wall & replace	C2	3.6 40m²

LANDSCAPE MANAGEMENT PLAN - APPENDIX 1
TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	BOOZEY FIELD, GRIFFITHS ROAD, WREXHAM	SURVEYOR:	A. HENDERSON
CLIENT:	GOWER HOMES LTD	ASSESSMENT DATE:	27/01/2015
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT	VIEWING CONDITIONS:	GOOD
		JOB REFERENCE:	14/AIAWXXM142

TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
G1	Sycamore Ash	EM	≤15 1N	4.5	3	3	3	≤300	M	- Overgrown self set trees - Many trees coppiced with multiple stems now forming from base - E.R.C. 10+	Remove two small trees to east as indicated on plans	C2	3.6 41m²
G2	Sycamore	EM	≤15 1S	3	3	3	3	≤290	M/G	- Linear group of unmanaged trees forming dense closed canopy along northern boundary with residential dwellings beyond - Collectively valuable as screen but no trees on any individual merit - Ivy clad - Some trees coppiced and now forming multiple stems from base - E.R.C. 10+	N/A for development	C2	3.5 38m²
G3	Ash Sycamore	EM	≤16 1S	4	5	4	4	≤320	M	- As G2 - linear group of stems at 0.5-1m centres - appear to be stems left to grow from past hedgerow - No trees of individual merit but collectively forms good screen to residential dwellings to north - E.R.C. 20+	3rd party trees	B2	3.8 46m²
G4	Sycamore Ash	EM	≤15 1S	4	5	4	4	≤300	M	- As G3 - E.R.C. 10+	3rd party trees	B2	3.6 41m²
G5	Sycamore	EM	≤15 1S	2.5	2.5	2.5	2.5	≤280	M	- Overgrown self set scrub of no particular value - E.R.C. 10	Remove trees within site boundary for pedestrian access	C2	3.4 35m²

LANDSCAPE MANAGEMENT PLAN - APPENDIX 1
TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	BOOZEY FIELD, GRIFFITHS ROAD, WREXHAM	SURVEYOR:	A. HENDERSON	
CLIENT:	GOWER HOMES LTD	ASSESSMENT DATE:	27/01/2015	PAGE 5 OF 5
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TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m) N S E W			STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
H1	Elm - Dead Holly Hawthorn Sycamore	M	≤3				≤150	M	- Unmanaged hedge on top of steep sided roadside embankment - Multiple small diameter Elm & Sycamores stems - elm are all dead - E.R.C. 10+	Needs to be brought back into good management with all sycamore/Elm stems removed and gaps filled with new hedge plants	C2	1.8 10m²

Planting & Aftercare Specification

Timing
The planting scheme is to be implemented within the first available planting season (October to March) after the first use of the development.

Planting medium
Imported topsoil is to comply with BS 3882 (2015) Multipurpose. Tree and shrub Planting compost is to be ALS Premier peat free tree planting and mulching compost incorporating Complete Soak granular at time of manufacture. Generally allow for 2 parts topsoil and 1 part planting compost. All available from Amenity Land Services (Tel no. 01592 641 949).

Allow for min. 450 mm depth topsoil cover for all proposed native, amenity shrubs and ground cover beds with formation cleared of debris / foreign material and broken up to min. 150mm depth to relieve compaction. Allow for min 100mm excavation and backfill for each tree station. Proposed amenity grass areas to comprise min 300mm depth free draining soil overlain with min. 150mm depth imported topsoil cover.

Planting
Plant material is to comply with BS3936 (Specification for Nursery stock, Part 1, 1992) and BS5236 (Recommendations for the cultivation of trees in the Extra Large Nursery Stock Category) unless otherwise approved. Lifting, handling,, delivery and temporary storage of plant material will be the responsibility of the Contractor and should be carried out in accordance with the Plant Handling specification issued by the Committee for Plant Supply and Establishment. Prior to mulching allow for watering all trees and shrubs, perennials and green screens to full ground capacity at time of planting. Newly seeded / turfed grass areas should be kept adequately watered until satisfactorily established.

Trees in open grass will require proprietary strimmer guards to be fitted in accordance with suppliers recommendations - available from Amenity Land Services (Tel no. 01592 641 949).

Mulch
Mulch for trees / ornamental shrubs / groundcover is to be an approved type Bark mulch (range 5 - 35mm to be spread throughout all planted areas to a depth of 75mm and topped up annually. Trees in grassland are to be mulched to 75mm depth around the base to a 500mm radius and kept weed free throughout the establishment period.

Tree and Shrub Pits
Excavation of each tree and shrub pit is to be carried out to the minimum dimensions below. Excavated topsoil is to be carefully set aside for re-use and not allowed to become mixed with subsoil. Excavated subsoil and surplus topsoil is to be disposed of off-site or as otherwise directed on site. Pit volumes after excavation are to be suitable for the size of rootstock but not less than:-

Shrubs up to 1m high	300 x 300 x 300mm	27 Litres
Trees and shrubs up to 3m high	900 x 900 x 900mm	729 Litres
Trees and shrubs over 3m high	1200 x 1200 x 1200mm	1728 Litres

Drainage in each tree pit is to be improved by breaking up the base to a further depth of 150mm and forking over the sides to prevent the creation of an impermeable barrier from smearing during excavation. Tree pits are to be backfilled with 2 parts selected topsoil thoroughly mixed with 1 part tree / shrub planting compost.

Tree stakes and ties (Feathers and <16cm trees)
Tree stakes are to be lanalised softwood, straight, pointed at one end, free of bark and without any projections. Stake use will vary according to the size, form and species of tree being supported as shown on the drawings. Stakes are to be set to the windward side of trees in advance of planting unless otherwise requested on site. All stakes are to be long enough to project 900mm into the ground and to finish at specified heights above ground after fixing as below

Feathered trees	Low stake	600mm
Selected Standard trees	Low stake	600mm
Tall Standard Trees	Tall stake	1800mm
Heavy Standard trees	Twin stakes	1800mm
EHS / AHS trees	Underground guying	
Semi-mature trees	Underground guying	

Tree ties are to be Greenleaf hessian Nature Tie or similar fixed in accordance with suppliers recommendations. Tree stakes and ties are to be removed after 2-3 years to ensure successful establishment within the statutory aftercare period.

Ground Anchors (16-18 / 18-20cm girth trees)
ANS tree anchors are to be Platipus tree anchoring system, RFP or similar approved type including Plati-Mats. Irrigation system for standard and larger trees is to be Padder Tree irrigation or similar approved type sized to suit rootball dia.

All trees are to be planted in accordance with BS8545:2014 "Trees: from nursery to independence in the landscape". Wherever feasible trees are to be planted at least 2m away from roads, paving and other hard surfacing.

5 year establishment period
Each year check monthly (April to October) the health and vigour of all trees, shrubs and groundcover and prune to remove dead branches, maintain good form and encourage flowering once annually at an appropriate time. Tree pruning is to be undertaken in accordance with the current British Standard 3998

Allow for clearing litter from planting beds

Keep all planted areas weed free at all times, top up mulch to all planted areas to maintain 75mm depth at least once annually. Maintain a fully mulched; weed free 1m ring around each tree in open grass areas. Each year any plant material which is dead, dying or failing to thrive is to be replaced on a like for like basis during the first planting season (October to March) following failure.

Allow for checking / firming tree stakes / soil around rootballs and adjusting tree ties at least monthly. Remove tree ties and stakes after 2-3 years.

Allow for mowing amenity grassland areas upto 13 times annually and for re-levelling, seeding and reinstatement of any damaged areas of grass. Delay cutting bulb areas under trees and around shrub beds where indicated to suit flowering period of bulbs.

Irrigation
Allow for watering all shrubs, perennials, green screens and newly established grass areas to full ground capacity as required, checking weekly during times of drought, and watering to full ground capacity on each occasion.

Standard and larger tree irrigation - Generally, trees may need to be watered regularly from April to October during the establishment period in accordance with the following schedule.

Year one - Allow for irrigating fortnightly between May and September inclusive (10 irrigation visits), however if no significant rainfall is received during April start cycle one month early (12 irrigation visits in total).

Year two - Allow for irrigating once in May and September and fortnightly June, July, August (8 irrigation visits), however if no significant rainfall is received during April start cycle one month early (9 irrigation visits in total).

Year three - Allow for irrigating once in June, twice in July, once in August (4 irrigation visits)

NB - Summer showers that may seem heavy do not penetrate more than 5cm of soil and do little to help the tree establish, accordingly fortnightly watering should be a regular routine regardless of summer rainfall.

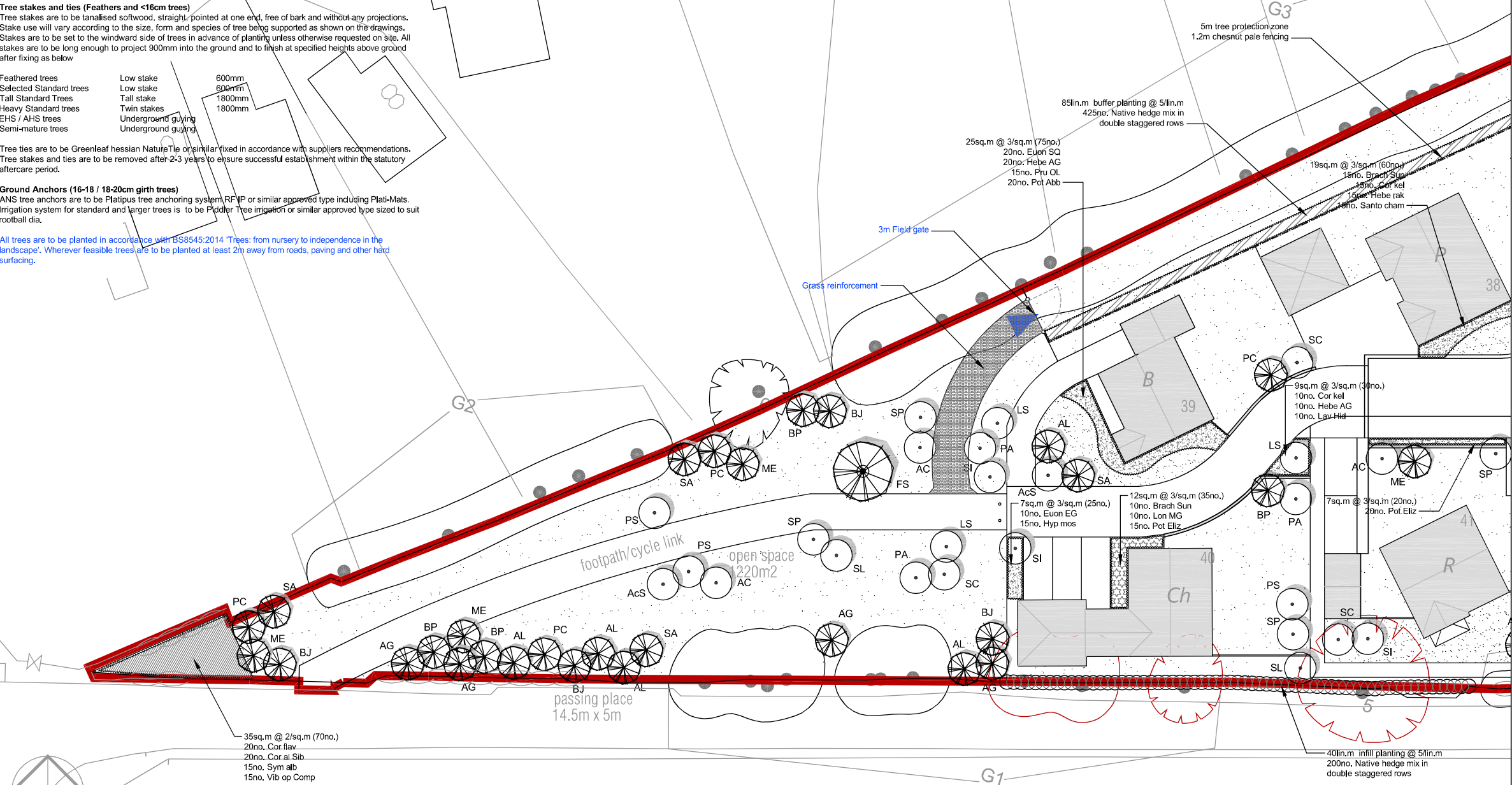
Standard and larger trees are to be fitted with proprietary irrigation tubes as described, trees in open amenity grassland are to be planted into localised 1000-1200mm dia depressions 50-100mm deep to localise the infiltration of water during irrigation.

As a general rule provide 50 litres for every 25cm of trunk circumference. Apply half the water via the irrigation pipe (if fitted) and half over the surface of the pit area, so that it soaks into the area of the root system. Take care to ensure that water does not run off the surface, taking it away from the tree. If necessary form berms to the edge of the pit area, to retain the water as it is applied. Use this table as a guide for the amount of water to be delivered at each watering:

Stem Girth (cm)	Height	Litres
12/14	2.5 - 3.0	25
14/16	2.5 - 3.0	30
16/18	3.0 - 3.5	35
18/20	3.5 - 4.0	40
20/25	4.0 - 4.5	50
25/30	4.5 - 5.0	60
30/35	5.0 - 5.5	70
35/40	5.5 - 6.0	80
40/50	6.0 - 7.0	100
50/60	7.0 - 8.0	120
60 +	8.0m +	140

During periods of exceptionally wet weather do NOT water if the ground around the rootball is sodden, delay watering for one week and re-assess. If water is puddled on top of the rootball or pit area then gently use a fork to create holes around the edge of the tree pit, not too close to the rootball, to increase drainage and to stop the soil becoming anaerobic. Remove any water that does not drain away significantly from the surface of the rootball with a bucket.

During periods of severe drought - before watering use a fork to create holes around the edge of the tree pit, not too close to the rootball, to increase permeation of water and deliver 1.5 times the amount of water stated in the above table. After watering cover the entire pit area with bark mulch to a depth of 75mm as described.



PLANTING SCHEDULE

Shrub planting (~3/sq.m)	Height	Grown	No.	Notes
Brachyglottis Sunshine	30-40cm	PG 3L	80	Bushy
Cornus alba Sibirica	60-90cm	BR	70	1 + 2
Cornus flavrimeae	60-90cm	BR	75	1 + 2
Cornus kelseyi	20-30cm	PG 2L	140	Bushy
Cornus sang Mid Winter Fire	60-90cm	BR	30	1 + 2
Cotoneaster salicif. Gnom	30-40cm	PG 2L	00	Branched
Escallonia Apple Blossom	30-40cm	PG 2L	140	Branched
Euonymus Emerald and Gold	20-30cm	PG 2L	245	Bushy
Euonymus Silver Queen	20-30cm	PG 2L	240	Bushy
Fuchsia Mrs Popple	30-40cm	PG 3L	/	Branched
Hebe Autumn Glory	20-30cm	PG 2L	100	Branched
Hebe rakaiensis	20-30cm	PG 2L	105	Branched
Hypericum moserianum	20-30cm	PG 2L	220	Bushy
Lavandula Hidcote	20-30cm	PG 2L	80	Bushy
Lonicera May Green	30-40cm	PG 2L	40	Branched
Mahonia x media Charity	30-40cm	PG 2L	40	Branched
Potentilla frutic Abbotswood	30-40cm	PG 2L	90	Bushy
Potentilla frutic Elizabeth	30-40cm	PG 2L	180	Bushy
Prunus laur' Otto Luyken	20-30cm	PG 2L	200	Branched
Santolina chamaecyparissus	20-30cm	PG 2L	190	Bushy
Spiraea Anthony Waterer	30-40cm	PG 2L	/	Bushy
Spiraea Goldmound	30-40cm	PG 2L	45	Bushy
Symphoricarpos albus	40-60cm	BR	35	0 + 1
Viburnum opulus Compactum	30-40cm	PG 2L	65	Branched
Vinca minor Alba	20-30cm	PG 2L	10	6 shoots min

Note: To be planted in single species groups in mixed shrub beds unless shown otherwise

Native hedge mix (1565 @ 5/lin.m)	Height	Grown	No.	Notes
Crataegus monogyna	60-80cm	BR	785	1+2 whips
Corylus avellana	60-80cm	BR	155	1+2 whips
Ligustrum vulgare	60-80cm	BR	160	1+1 whips
Ilex aquifolium	40-60cm	PG 2L	155	Branched
Rosa canina	60-80cm	BR	155	1+2 whips
Viburnum opulus	40-60cm	BR	155	1+1 whips

Perennial planting Mix (685 @ 5/sq.m)	Height	Grown	No.	Notes
Acanthus spinosus	20-30cm	PG 2L	70	Bushy
Astrantia major	20-30cm	PG 2L	70	Bushy
Bergenia Silberlicht	20-30cm	PG 2L	65	Bushy
Crocsmia Emily McKenzie	20-30cm	PG 2L	70	Bushy
Geranium m. Ingwersen Variety	20-30cm	PG 2L	70	Bushy
Geranium macrorrhizum Snowsprite	20-30cm	PG 2L	70	Bushy
Hemerocallis Happy Returns	20-30cm	PG 2L	65	Bushy
Kniphofia Little Maid	20-30cm	PG 2L	70	Bushy
Salvia officinalis Purpurea	20-30cm	PG 2L	65	Bushy
Sedum Autumn Joy	20-30cm	PG 2L	70	Bushy

Feathered Trees	Height	Grown	No.	Notes
AL - Amelanchier lamarckii	2.1-2.4m	OG	12	low stake
AG - Alnus glutinosa	2.1-2.4m	OG	13	low stake
BP - Betula pendula	2.1-2.4m	OG	13	low stake
BJ - Betula utilis Jacquemontii	2.1-2.4m	OG	12	low stake
ME - Malus Evereste	2.1-2.4m	OG	13	low stake
PC - Pyrus Chanticleer	2.1-2.4m	OG	11	low stake
SA - Sorbus aucuparia	2.1-2.4m	OG	13	low stake

Heavy Standard Trees	Girth	Grown	No.	Notes
AcS - Acer campestre Streetwise	12-14cm	Air PG	11	ground anchor
AC - Alnus Cordata (AGM)	12-14cm	Air PG	8	ground anchor
LS - Liquidamber styr Lane Roberts	12-14cm	Air PG	11	ground anchor
PA - Prunus avium Plena	12-14cm	Air PG	12	ground anchor
PS - Prunus Snow Goose (Umineko)	12-14cm	Air PG	9	ground anchor
SP - Sorbus aucuparia Asplenifolia	12-14cm	Air PG	14	ground anchor
SL - Sorbus aria Lutescens	12-14cm	Air PG	9	ground anchor
SC - Sorbus Cashmeriana	12-14cm	Air PG	10	ground anchor
SI - Sorbus intermedia	12-14cm	Air PG	7	ground anchor

ANS / SM Trees (10no.)	Girth	Grown	No.	Notes
AA - Alnus Cordata (AGM)	16-18cm	Air PG	4	ground anchor
AP - Acer platanoides Crimson King	16-18cm	Air PG	3	ground anchor
FS - Fagus sylvatica	18-20cm	Air PG	1	ground anchor
LR - Liquidamber styr Lane Roberts	16-18cm	Air PG	1	ground anchor
PV - Prunus avium	16-18cm	Air PG	1	ground anchor
QR - Quercus robur	18-20cm	Air PG	1	ground anchor

Native trees (25no.) & shrubs (180no.)	Height	Grown	No.	Notes
Cornus sanguinea	60-80cm	BR	30	1+2 whips
Corylus avellana	60-80cm	BR	30	1+2 whips
Ligustrum vulgare	60-80cm	BR	30	1+1 whips
Ilex aquifolium	40-60cm	PG 2L	30	Branched
Rosa canina	60-80cm	BR	30	1+2 whips
Viburnum opulus	40-60cm	BR	30	1+1 whips

Acer campestre	1.5-1.75m	BR	5	Feathered trees
Alnus glutinosa	1.5-1.75m	BR	5	Feathered trees
Betula pendula	1.5-1.75m	BR	5	Feathered trees
Populus tremula	1.5-1.75m	BR	5	Feathered trees
Sorbus aucuparia	1.5-1.75m	BR	5	Feathered trees



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Proposed residential development
soft landscape proposals (sheet 1 of 3)

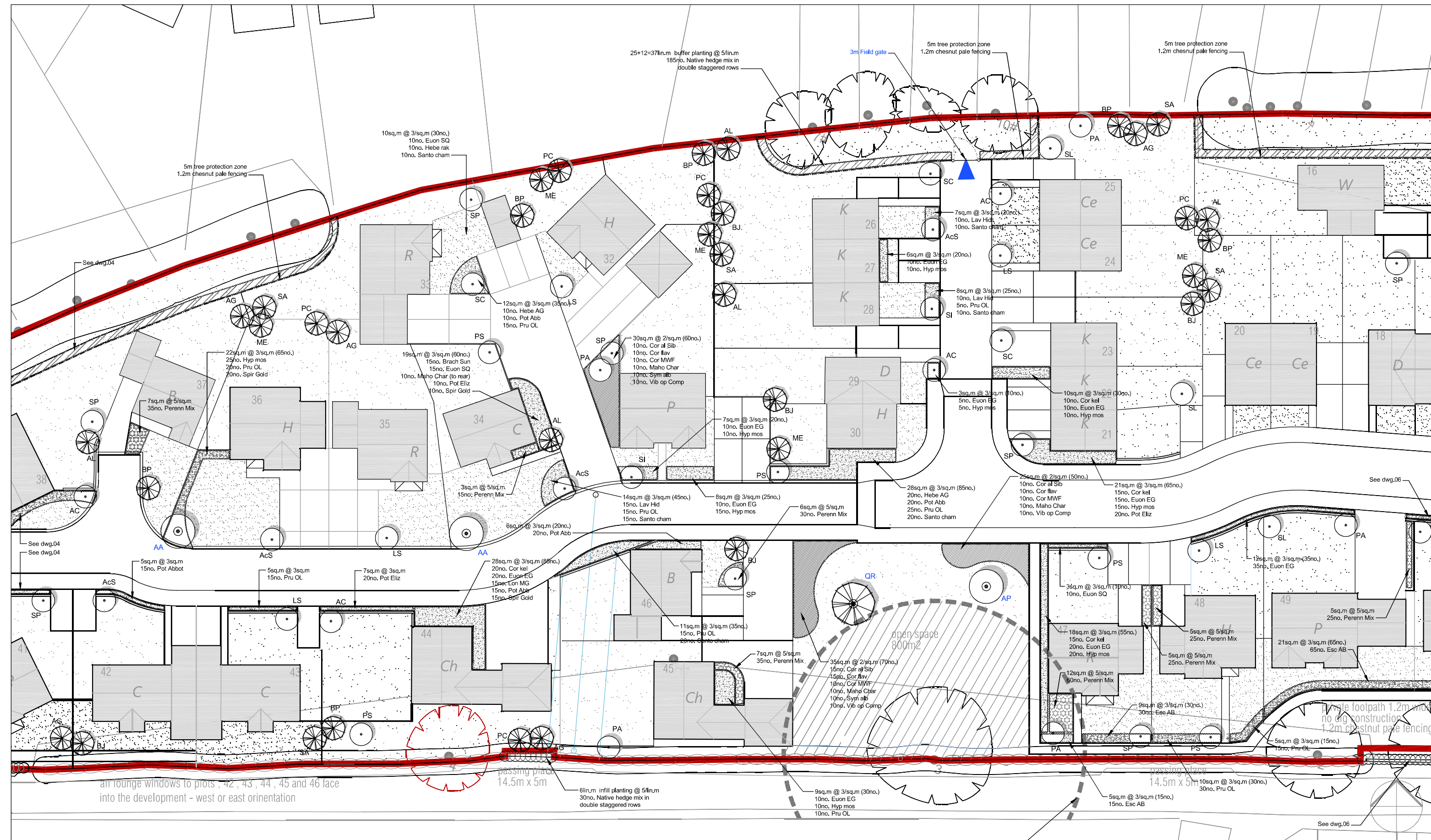
Dwg.No. 05/117/04

v1.6

A1 @ 1/200

Feb 2017

revision v1.6 - sewer easement added & tree planting revised (03/2018)
revision v1.5 - layout and planting amendments (06/2017)
revision v1.4 - layout and planting amendments (06/2017)
revision v1.3 - layout and planting amendments (05/2017)
revision v1.2 - layout and planting amendments (05/2017)
revision v1.1 - layout and planting amendments



Refer to dwg.04 for planting guidance notes and summary schedules

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Proposed residential development
soft landscape proposals (sheet 2 of 3)

Dwg.No. 05/117/05

v1.6

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Oct 2016



Refer to dwg.04 for planting guidance notes and summary schedules

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	Gower Homes Ltd. Land at Boozey Field - Stansty - Gwersyllt		
	Proposed residential development soft landscape proposals (sheet 3 of 3)		
	Dwg.No. 05/117/06	v1.6	A1 @ 1/200

Hard landscape elements

Internal roads, parking bays, footways and other amenity paths
Bitumen macadam finish with thermoplastic or painted white lining all to Highways final approvals

Pedestrian paving (frontages)
Marshalls 450x450mm Charnwood 50mm (pedestrian grade) textured concrete block paving - colour Buff.

Pedestrian paving (rear gardens)
Marshalls 600x600mm pcc 50mm (pedestrian grade) concrete slab paving - colour Grey.

Road & footway edgings
Marshalls, or other approved, 125x255mm pcc HB2 road kerbs to roads and 150x50mm flat top pcc edgings finishing flush to adjacent paving and soft landscape levels

Reinforced grass
Reinforced grass links from road across grass areas to entrance gates for tree protection buffer zones to be Terram Bodpave 85 or similar

Fencing & Gates
Jacksens, or similar, 1.8m "hit and miss" panel fencing with timber posts, rails and pales in in-situ concrete footings to external rear garden boundaries. Internal rear boundaries between plots to be 1800mm high timber panel to Contractors final details. Gates to match fence details

Walls
1800 x 225mm brick to match house brickwork with 2 course blue engineering dpc at ground level and blue eng. brick on edge copings

Knee rails
Jacksens, or similar, Diamond style 100mm square treated softwood posts & rails with galv. tie straps



Knee rails

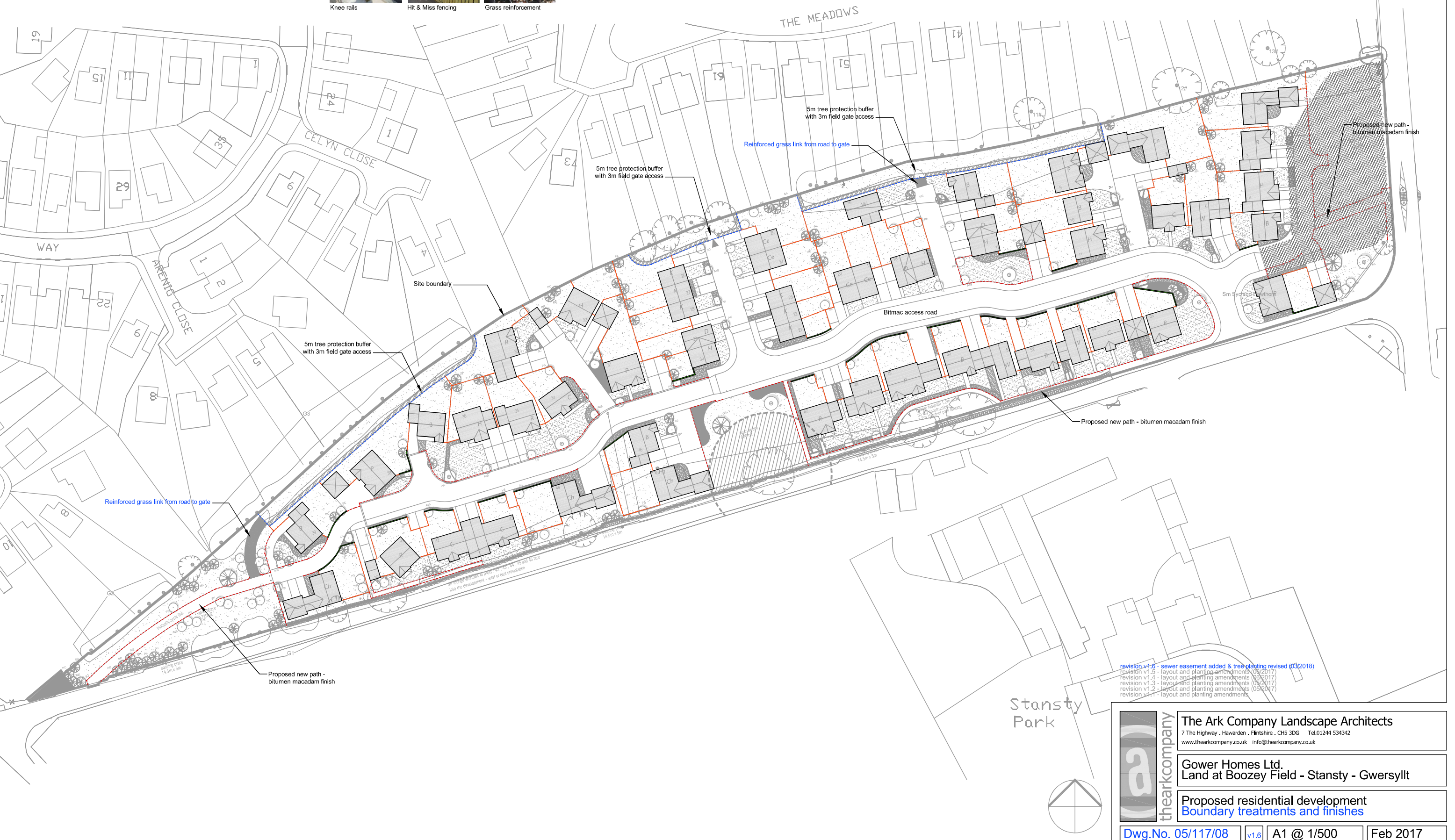


Hit & Miss fencing



Grass reinforcement

	Proposed shrub planting		Proposed Advanced Heavy Standard trees		Proposed 1.8m brick walls to rear gardens
	Proposed perennial planting		Proposed semi-mature trees		Proposed 1.8m timber panel fencing & gates to rear gardens
	Proposed amenity grass areas and grass reinforcement		Proposed heavy standard trees		Proposed timber knee rails adjacent roads and paths
	Proposed new hedges and 1200mm chestnut pale fencing where appropriate		Proposed feathered trees		



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	Gower Homes Ltd. Land at Boozey Field - Stansty - Gwersyllt
	Proposed residential development Boundary treatments and finishes
	Dwg.No. 05/117/08 v1.6 A1 @ 1/500 Feb 2017