GENERAL NOTES

All plants supplied shall comply with the National Plant Specification. Supplying nurseries shall be registered under the Horticultural Trade Association (HTA) Nursery Certification Scheme. All plants shall be packed and transported in accordance with the Code of Practice for Plant Handling as produced by CPSE.

Native species shall be British provenance, where available, and certified to confirm origin.

Good Horticultural Practice
All landscaping work shall adopt good horticultural practices. Compost, mulch and soil conditioners shall be peat-free. The use of pesticides (herbicides, insecticides, fungicides, slug pellets etc) shall be discouraged. Any pesticides used shall be non-residual. i.e. glyphosate.

Protection of Existing Trees/Hedgerows
Existing trees/hedgerows retained on or overhanging the site shall be protected in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Protection measures shall be implemented prior to any preliminary or preparation works on site.

Nesting Birds
To ensure compliance with the Wildlife & Countryside Act 1981 (as amended), vegetation clearance shall be undertaken outside the bird nesting season, which generally extends between March and September inclusive, dependent on weather. If birds are found to be nesting any works which may affect them shall be stopped until the young have fledged and the nest abandoned naturally.

GROUND PREPARATION

Formation Level
The site shall be brought to formation level using a suitable fine-graded material where possible to avoid large voids but retain free drainage, and de-compacted to a depth of at least 300mm.

Subsoil
Provide a minimum depth of subsoil beneath the topsoil layer as specified below. Where there is insufficient depth excavate and dispose of material, loosen the formation and make up with additional subsoil or second quality topsoil. Grade to smooth flowing contours to achieve specified finished levels of topsoil.

Imported subsoil/second quality topsoil shall be supplied in accordance with BS 8601:2013. It shall be free of pests, diseases, visible fragments and roots of aggressive weeds, sticks, straw, turf and significant quantities of foreign matter such as building materials, vegetation, lumps of clay, and the like. Do not use any materials contaminated with rubbish or other materials that are:

- corrosive, explosive, or flammable
- hazardous to human or animal life
- detrimental to healthy plant growth

Prior to the placement of topsoil, and when ground conditions are reasonably dry, the subsoil shall be thoroughly loosened to full depth. Any stones larger than 75mm and other items including bricks, kerbs, lumps of concrete, plaster, timber, plastic, glass, metal and any other building debris brought to the surface shall be removed.

Topsoil
Imported topsoil to ***BS 3882: 2015*** - multi-purpose for general landscaping operations.

Imported topsoil shall be spread in layers not exceeding 150mm depth to achieve the depths as specified below. Finished levels shall be smooth flowing, free of minor hollows and high spots and marry neatly with paving, kerbs, edgings, manhole covers and existing levels.

Soil handling operations shall be carried out when the soil is reasonably dry and non-plastic (friable) in consistency (at least 5% below the Lower Plastic Limit). Topsoil shall not be unnecessarily compacted by trampling or trafficking of site machinery. Topsoil handling shall be stopped during and after heavy rainfall, and not continued until the soil is again non-plastic in consistency.

Depths & Clearances
Provide a minimum depth of subsoil and topsoil as follows:

- Ornamental Shrubs: 400mm topsoil (maximum) over 200mm (minimum) subsoil with a minimum clearance to formation level of 600mm
- Native Hedges: 300mm topsoil (maximum) over 300mm (minimum) subsoil with a minimum clearance to formation level of 600mm
- Tree pits: 400mm topsoil (maximum) over 600mm (minimum) subsoil with a minimum clearance to formation level of 1000mm

New Tree Planting Adjacent Services & Structures
All trees and shrubs, whether existing, felled, or proposed, on or adjacent to the site shall be taken into consideration by the applicant's structural engineer when calculating foundation types and depths.

- No tree shall be planted within 6m of centreline of an adoptable sewer
- All trees planted within 3m of a building or heavily loaded structure shall have their roots deflected away by means of a high density deep application root barrier to avoid direct damage from future tree growth.
- All trees within 2m of a masonry boundary wall, or within 3m of any hard paved surface or underground service, shall have their roots deflected away by the installation of a tree root barrier system to avoid direct damage from future tree growth.

Root Barrier System

- For protection of building foundations: ReRoot 2000 high density deep application root barrier as supplied by GreenBlueUrban Ltd., or similar
- For protection of pavements only (surround applications): Root Director preformed root protection system as supplied by GreenBlueUrban Ltd., or similar; size dependent on predicted girth (circumference) of mature trunk (to be advised by manufacturer)
- For protection of pavements & underground services/utilities(linear applications): ReRoot ribbed root barrier as supplied by GreenBlueUrban Ltd., or similar; size dependent on predicted girth (circumference) of mature trunk (to be advised by manufacturer)

Installation in full accordance with manufacturer's instructions.

The Landscape Contractor shall be responsible for acquiring 'As-Built' drain and service plans before commencing work on site.

LANDSCAPE MAINTENANCE

All new planting and hard landscape areas shall be maintained throughout the year as follows:

Hard Landscape Areas

- Sweep up leaf fall under trees and windblown in formal and hard landscape areas
- Sweep all hard landscape areas to remove dust and debris

Shrubs & Hedgerows

- Weed Control - All planting beds shall be kept weed free by hand weeding or herbicide treatment. Top up mulch twice annually in spring and autumn to maintain original specified depth
- Firming & Pruning - firm and prune all newly planted shrubs and hedges in accordance with good horticultural practice to promote healthy, bushy growth and to ensure individual plants establish dense cover as rapidly as possible. Any damaged shoots or branches shall be pruned back to healthy wood
- Trim back growth overhanging adjacent footpaths and parking areas
- Shrubs grown for coloured stems (Dogwood) - In the second or third year after planting all stems shall be cut down to 50-75mm above ground level, or to 50mm above the coppice stool if cut down previously, and thereafter every other year to maintain a succession of coloured stems. This shall be carried out in early Spring but outside the bird nesting season.
- Native Mixed Species Hedgerows - Once established, trim hedges on a two-year rotation so that no more than one half of the hedge is cut in any one year to ensure there are always flowers for pollinators in spring and berries for birds in winter. Trimming shall be carried out during the dormant season but outside the bird nesting season which generally extends from March to September inclusive. Where possible, cutting shall be delayed until January/February as hedgerow berries provide an important source of food for birds in autumn/winter
- Hornbeam Hedgerows - Once established, trim twice a year to maintain a more managed appearance; once at the end of June, and again in January or February before the buds form taking care not to disturb nesting birds
- Apply an annual application of slow-release fertiliser to planting beds during March/April in accordance with manufacturer's instructions
- Monitor health and control pests and diseases
- Watering - water as required to ensure establishment and survival (see below)

Specimen Trees
Individual trees planted as specimens shall be inspected annually during the growing season and maintained as follows:

- Firm and straighten to an upright position as required
- Maintain irrigation systems/pipes in good working order. Irrigation pipes shall be checked and repaired as necessary
- All tree stakes and ties are to be checked and adjusted if too loose, too tight, or if chaffing is occurring. Any broken stakes are to be replaced
- Formative pruning to include: removal of epicormic shoots, deadwood, competing secondary leader shoots, and closely spaced, duplicated branches with potentially weak or tight forks. All tree works to be carried out in accordance with BS 3998:2010.
- Apply an annual application of slow release fertiliser during March and April at a rate of 50g per tree
- Watering - Water as required to ensure establishment and survival (see below)

Watering
During the first two years after planting a monitored watering regime shall be implemented, commencing from the end of March/early April to the end of October - depending on weather conditions. Apply water when there has been no appreciable rain for 7 days or when there has been drying winds or very high temperatures.

Replacement of Failed or Defective Plants
Following the initial 12 months defects period any trees or plants which within a period of 5 years from the completion of the development are missing, found dead, or are seriously damaged or diseased shall be replaced in the next planting season.

PLANT SCHEDULE

SPECIMEN TREES

Ref	Species	Girth (cm)	Form	Height	Root Condition	Qty
AcE	Acer campestre 'Elsrijk'	14-16cm	Extra Heavy Standard	425-600cm	Rootball	1
ArOG	Acer rubrum 'October Glory'	14-16cm	Extra Heavy Standard	425-600cm	Rootball	1
Bp	Betula pendula	14-16cm	Extra Heavy Standard	425-600cm	Rootball	2
Ch	Carpinus betulus	14-16cm	Extra Heavy Standard	425-600cm	Rootball	3
PcC	Pyrus calleryana 'Chanticleer'	14-16cm	Extra Heavy Standard	425-600cm	Rootball	1
PpA	Prunus padus 'Albertii'	14-16cm	Extra Heavy Standard	425-600cm	Rootball	1
SaCR	Sorbus aucuparia 'Cardinal Royal'	14-16cm	Extra Heavy Standard	425-600cm	Rootball	1
Tc	Tilia cordata	14-16cm	Extra Heavy Standard	425-600cm	Rootball	3

TYPICAL TREE PIT DIMENSIONS

Form	Girth (cm)	Rootball		Tree Pit Dimensions		
		Diameter	Depth	Length	Width	Depth
Extra Heavy Standard	14-16cm	600mm	500mm	900mm	900mm	500mm

NATIVE MIXED HEDGE

Hedge				A	B
Length (m)				55	77
Species	**%**	**Height**	**Root Condition**	**Qty**	**Qty**
Acer campestre (Field Maple)	10	60-80cm	1+1 bareroot transplant	27	39
Cornus sanguinea (Dogwood)	15	60-80cm	1+1 bareroot transplant	41	58
Corylus avellana (Hazel)	20	60-80cm	1+1 bareroot transplant	55	76
Crataegus monogyna (Hawthorn)	20	60-80cm	1+1 bareroot transplant	55	76
Ilex aquifolium (Holly)	10	60-80cm	3 litre container	28	39
Ligustrum vulgare (Privet)	10	60-80cm	1+1 bareroot transplant	28	39
Viburnum opulus (Guelder Rose)	15	60-80cm	1+1 bareroot transplant	41	58
Total				**275**	**385**

NATIVE SHRUBS

Plot				1	2	3	4
Total Area (m2)				**104**	**119**	**52**	**166**
Species	**%**	**Height**	**Root Condition**	**Qty**	**Qty**	**Qty**	**Qty**
Corylus avellana (Hazel)	20	60-80cm	1+1 bareroot transplant	21	24	10	33
Cornus sanguinea (Dogwood)	20	60-80cm	1+1 bareroot transplant	21	24	10	33
Euonymus europaeus (Spindle)	20	60-80cm	1+1 bareroot transplant	21	24	10	33
Ligustrum vulgare (Privet)	20	60-80cm	1+1 bareroot transplant	21	24	10	33
Viburnum opulus (Guelder Rose)	20	60-80cm	1+1 bareroot transplant	20	23	12	34
			Total	**104**	**119**	**52**	**166**

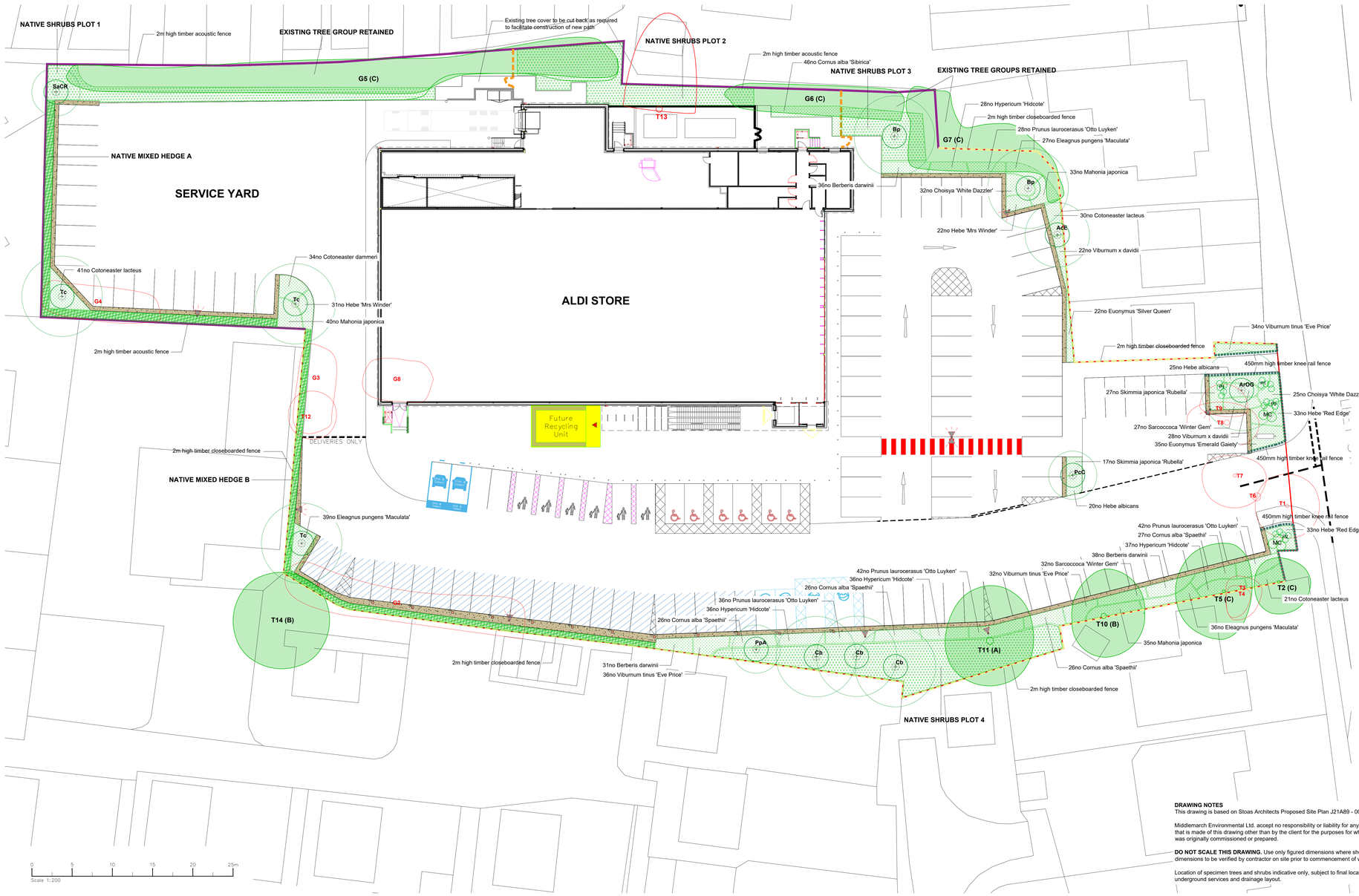
ORNAMENTAL SHRUBS

Species	Height	Size	Density	Qty
Berberis darwinii	30-40cm	3 litre container	4/m2	105
Choisya x dewitteana 'White Dazzler'	30-40cm	3 litre container	4/m2	57
Cornus alba 'Sibirica'	60-80cm	3 litre container	3/m2	46
Cornus alba 'Spaethii'	60-80cm	3 litre container	3/m2	105
Cotoneaster dammeri	30-40cm	3 litre container	4/m2	34
Cotoneaster lacteus	40-60cm	3 litre container	3/m2	92
Elaeagnus pungens 'Maculata'	30-40cm	3 litre container	4/m2	102
Euonymus fortunei 'Emerald Gaiety'	30-40cm	5 litre container	4/m2	35
Euonymus fortunei 'Silver Queen'	30-40cm	5 litre container	4/m2	22
Hebe albicans	30-40cm	5 litre container	4/m2	45
Hebe 'Mrs Winder'	30-40cm	5 litre container	4/m2	53
Hebe 'Red Edge'	30-40cm	5 litre container	4/m2	66
Hypericum 'Hidcote'	30-40cm	3 litre container	4/m2	137
Mahonia japonica	30-40cm	3 litre container	4/m2	108
Mahonia x media 'Charity'	60-80cm	10 litre container	specimen	6
Phormium 'Yellow Wave' (P1)	60-80cm	10 litre container	specimen	10
Phormium 'Pink Panther' (P2)	60-80cm	10 litre container	specimen	10
Prunus laurocerasus 'Otto Luyken'	30-40cm	3 litre container	4/m2	148
Sarcococca hookeriana 'Winter Gem'	30-40cm	5 litre container	4/m2	59
Skimmia japonica 'Rubella'	30-40cm	3 litre container	4/m2	44
Viburnum x davidii	20-30cm	3 litre container	4/m2	50
Viburnum tinus 'Eve Price'	30-40cm	3 litre container	4/m2	102

IMPLEMENTATION PROGRAMME

All soft landscape works including preparatory operations shall be carried out when all building works are complete and before the end of the first planting season, subject to the following constraints:

- No planting or preparatory operations shall take place when the ground is frost bound, covered by snow, excessively wet or waterlogged, or in excessively dry or windy conditions
- Container grown plants may be planted at any time during favourable weather and soil conditions. Watering and weed control to be provided as necessary
- Planting of bare-root and rootballed deciduous trees and shrubs, where specified, shall be carried out from late October to late March. All bare root stock, where used, shall be root dipped in mycorrhizal inoculant such as Alginure or similar, applied in accordance with the manufacturer's recommendations.
- Seed shall be sown in autumn or spring during calm weather and not when the ground is frost bound or waterlogged



KEY

Existing Landscape

Existing Tree Retained
Protect in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. See Middlemarch Environmental Preliminary Arboricultural Assessment Report No: RT-MME-157409-01

Existing Tree Group Retained
Protect in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. See Middlemarch Environmental Preliminary Arboricultural Assessment Report No: RT-MME-157409-01

Existing Tree/Tree Group Removed
To facilitate development. Replacement planting shall be carried out to compensate for any losses - see below.

Proposed Landscaping

Specimen Tree
Tree planting shall be carried out in accordance with BS 8545: 2014 'Trees: from nursery to independence in the landscape - Recommendations". All specified materials shall be installed in accordance with manufacturer's recommendations/instructions.

Predicted mature canopy spread indicated thus

Minimum size of tree pit indicated thus

Trees shall be planted into prepared pits to the original root collar - refer to table for typical dimensions.

Stated tree pit dimensions are a minimum; rootball dimensions can vary naturally between species, tree stock, suppliers, and season. In the event that the rootball exceeds the stated dimensions, the landscape contractor shall excavate the hole (in open ground) to the advice given in BS 8545: 2014 with the exception of tree pit diameter, which shall be varied to achieve a minimum radius of 150mm greater than the rootball. Tree pit depth shall generally be no greater than the existing rootball or container depth. Where necessary tree pit depth shall be increased from the stated dimensions to accommodate the depth of the rootball and obtain the correct planting level.

Care shall be taken to prevent smearing of tree pit sides, fork thoroughly to aid root penetration and drainage. Break up base of pit to a depth of 150mm to assist drainage, air movement, and root penetration, and leave slightly domed to prevent ponding.

Tree pits shall be backfilled with 'as dug' material (where suitable for tree growth) to replicate a natural soil profile comprising no more than 300-400mm depth of topsoil over a free-draining, sandy subsoil. All deleterious material shall be removed (weeds, broken brick and large stones etc). Where 'as dug' material is not suitable for tree growth imported topsoil to BS 3882:2015 (multi-purpose for general landscaping operations), and subsoil to BS 8601:2013, shall be used. During backfilling, the tree shall be gently shaken at regular intervals to settle the soil closely around the roots. The backfill shall be firmed in layers not exceeding 150mm to obtain the correct planting level.

Trees shall be secured in place with an underground guying system such as the Platipmat rootball fixing system, or equivalent, with underground guys secured to 1200 x 1200mm treated timber 'deadman' anchors.

Tree irrigation bags shall be fitted to all trees to ensure they are irrigated sufficiently during their establishment period.

The finished compacted pit shall receive a 75mm deep 8-35mm organic bark mulch layer to prevent weed growth and retain soil moisture. Mulch shall comprise composted wood chips or bark, free of pests, disease, fungus, and weeds, Prior to application clear all grass and weed growth and water tree pits thoroughly

Native Shrub Planting
Planting shall be carried out on a 1m staggered grid for quick, dense cover. Shrubs shall be planted in single species groups of 5-15. See plant schedule for species and sizes.

Native Mixed Species Hedge Planting
To be planted in a double staggered row hedging at 400mm between rows and 450mm centres within each row, and maintained at a height of 1.5m. See plant schedule for species and sizes.

Ornamental Shrub Planting
Evergreen and deciduous flowering shrubs planted in single-species groups or as individual specimens - see plant schedule for species, sizes, and planting density.

After the final placement of topsoil all areas to be planted shall be treated with a non-residual translocated herbicide to clear existing weeds and herbage, and thoroughly cultivated by hand or machinery to a depth of 300mm incorporating ameliorants as specified below. Hand cultivation shall be carried out to achieve the required finish in areas where machine cultivation is not possible (i.e. adjacent kerbs, manholes and footpath junctions, around retained trees etc.). All weeds, roots, and stones larger than 50mm brought to the surface shall be removed off site.

Container grown plants and bare-root transplants at the sizes stated in the plant schedule shall be pit-planted into cultivated beds in accordance with the planting arrangement. At each planting position sufficient soil shall be excavated from the bed to allow 75mm clearance between either the rootball, or the root ends when fully spread, and the sides and bottom of the planting hole. Each plant shall be set in the centre of the pit, showing its best side to the front. Finely broken back-fill material excavated from the pit shall be packed around the roots. The plants shall be gently shaken to allow fine soil to surround the roots. As soil is returned it shall be lightly consolidated and firmly heeled around the root collar.

All bare root stock shall be root dipped in mycorrhizal inoculant such as Alginure, or similar approved, applied in accordance with the manufacturer's recommendations.

All planting areas shall receive a 75mm deep 8-35mm organic bark mulch layer to prevent weed growth and retain soil moisture. Mulch shall comprise composted wood chips or bark, free of pests, disease, fungus, and weeds, Prior to application clear all grass and weed growth and water soil thoroughly.

Compost & Ameliorants for Shrub Beds & Hedges
A peat-free compost (e.g. PAS100: 2011/Landscape Institute/WRAP grade (10mm screened) green compost) shall be applied to a minimum depth of 50mm and worked into the soil. For native hedgerow shrubs compost shall be mixed into the planting pit only. Following this a suitable slow-release fertiliser shall be applied and spread at 50g/m2 to all planted areas.

Note.
All ornamental and native shrubs shall be set back 500mm from the edge of kerbs around perimeter of car parking bays. Areas to be mulched.

Bare Mulch Areas
8-35mm organic bark mulch comprising composted wood chips or bark, free of pests, disease, fungus, and weeds. Laid to a depth of 75mm over weed control membrane

PLANNING

P2: path added, tree planting updated, tree groups referenced	LK	22.09.22
P1: First Issue	LK	05.08.22
Revisions:	Dwn:	Date:

Project:	**Fleet Street, Holbeach**		
Client:	**ALDI Stores Limited**		
Drawing:	**Detailed Soft Landscaping**		
Date:	22.09.22	Drawn:	LK
Dwg No:	MEL-535-001	Scale:	1:250 @ A0
Revision:	P2		

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DRAWING NOTES
This drawing is based on Stoas Architects Proposed Site Plan J21A89 - 0003 P01.

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DO NOT SCALE THIS DRAWING. Use only figured dimensions where shown. All dimensions to be verified by contractor on site prior to commencement of works.

Location of specimen trees and shrubs indicative only, subject to final location of underground services and drainage layout.