SPECIFICATION NOTES

. General.

This plan to be read in conjunction with the following documents: Landscape works specification and other drawings by terra firma Architectural and engineering drawings and reports

2. General landscaping.

Arboricultural and ecological reports

- Existing levels to be preserved around retained existing trees and vegetation. Existing trees and vegetation to be retained are to be protected in accordance with BS5837: 2012 during
- construction ii. All landscape works to be undertaken by competent persons, with appropriate training and
- iii. All arisings to be removed from site at contractor's expense unless noted otherwise. (e.g. woodchip, gravel, topsoil, timber sleepers).

3. Services.

The contractor must ascertain for himself/herself the exact location of underground services before commencing work.

- 4. Soil Materials Generally. i. Purity: Soils shall be free from roots, stolons, rhizomes, propagules of perennial or invasive weeds couch grass, bindweed, docks, Japanese knotweed, giant hogweed and horsetail/marestail (Equisetum avense).
- ii. Foreign matter: On visual inspection, free from non-soil material, brick and other building materials and wastes, sharps, and any other foreign matter or material or substance that would render the soil or soil ameliorant unsuitable for use. iii. Contamination: Do not use topsoil, subsoil, sand or compost contaminated with rubbish or
- other materials that are: •Corrosive, explosive or flammable;
- Hazardous to human or animal life; •Detrimental to healthy plant growth.

iv. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil, subsoil, sand or compost or other planting media to be used.

5. Soil testing

Each soil source (imported and site-won subsoil and topsoil - see items 6-8 and 9 below) shall be analysed by Tim O'Hare Associates, Howbery Park, Wallingford, Oxon OX10 8BA, Tel: 01491 822653, Email: info@toha.co.uk, www.toha.co.uk (or equivalent approved).

6. Subsoil for general planting areas (sample of site-won and/or imported subsoil to be sent for testing to check compliance with parameters below) Provide subsoil as necessary to make up deficiency on site. Natural or manufactured subsoil (from approved source) will be acceptable (within parameters given below). Subsoil to be tested to determine suitability for proposed use for planting; test report to be submitted for approval and to enable amelioration recommendations. Subsoil should be free from commonly tested contaminants, including asbestos. Subsoil parameters to be within the following:

Parameter		Unit	Lower Limit	Upper Limit
Clay (<0.002mm)		%	5	35
Silt (0.002-0.05mm	ו)	%	0	35
Sand (0.05-2.0mm) of which at least 40%			
shall fall into fine to	medium sand range	%	50	90
Stones (2-50mm)		%DW		50
Stones (>50mm)		%DW		0
pH Value		Unit	5.5	8.5
Electrical Conducti	vity (1:2.5 water extract)	µS/cm		1500
Electrical Conducti	vity (CaSO4 extract)	µS/cm		2800
Exchangeable Soc	lium Percentage	%		15
Organic Matter		%		1.5

Subsoil for tree pits (sample of site-won and/or imported subsoil to be sent for testing to

including asbestos. Subsoil parameters to be within the following:

check compliance with parameters below) Provide subsoil as necessary to make up deficiency on site. Natural or manufactured subsoil (from approved source) will be acceptable (within parameters given below). Subsoil to be tested to determine suitability for proposed use; test report to be submitted for approval and to enable amelioration recommendations. Subsoil should be free from commonly tested contaminants,

Para	imeter	Unit	Lower Limit	Upper Lin
Clay	r (<0.002mm)	%	5	18
Silt (0.002-0.05mm)	%	0	25
San	d (0.05-2.0mm) of which at least 40%			
	I fall into fine to medium sand range	%	60	90
Ston	les (2-50mm)	% dry wt.		50
Ston	ies (>50mm)	% dry wt.		0
pH V	/alue	Unit	5.5	8.5
Elec	trical Conductivity (1:2.5 water extract)	µS/cm		1500
Elec	trical Conductivity (CaSO4 extract)	µS/cm		2800
Exch	nangeable Sodium Percentage	%		15
Orga	anic Matter	%		1.5

8. Topsoil for general landscapes (sample of site-won and/or imported topsoil to be sent for testing to check compliance with parameters below and to inform any necessary amelioration - see 9. below)

Existing topsoil to be stripped and re-used, provided soil is within parameters given below when analysed. Imported topsoil to be good quality sandy loam or manufactured topsoil (from approved source, meeting parameters given below). Topsoil (site-won or imported) is to be tested to determine suitability for proposed use and should be free from commonly tested contaminants, including asbestos; test report to be submitted to Landscape Architect for approval and to enable amelioration recommendations to be made:

Parameter	Unit	Lower Limit	Upper Limit
Clay (<0.002mm)	%	5	18
Silt (0.002-0.05mm)	%	0	35
Sand (0.05-2.0mm) of which at least 40%			
shall fall into fine to medium sand range	%	50	85
Stones (2-20mm)	% dry wt.	0	20
Stones (20-50mm)	% dry wt.	0	15
Stones (>50mm)	% dry wt.	-	0
pH Value	Unit	5.5	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm		1500
Electrical Conductivity (CaSO4 extract)	µS/cm		2800
Exchangeable Sodium Percentage	%		15
Organic Matter	%	4.0	8.0
Total Nitrogen	%	0.15	
Carbon: Nitrogen Ratio			20:1
Extractable Phosphorus	mg/l	26	100
Extractable Potassium	mg/l	240	1200
Extractable Magnesium	mg/l	50	600

9. Ameliorant: fertilizer and compost (contractor is responsible for submitting a sample of imported or site-won topsoil (to inform requirements).

Topsoil amelioration to be determined by analysis. Once amelioration requirements ascertained as required, approved (peat free) composts to PAS100 and/or fertilizers to be incorporated during cultivation at required rate to full depth of growing medium.

10. Soil handling and depths. Management of soils to be in accordance with the Construction Code of Practice for the Sustainable

- Use of Soils on Construction Sites i. Topsoil and subsoil to be handled (i.e. excavated and/or imported, stored, spread, cultivated) in accordance with method agreed in writing by Landscape Architect prior to work commencing. All topsoil and subsoil areas shall be thoroughly cultivated by hand or suitable machinery to the full depth of the topsoil layer, incorporating ameliorants as required. If compaction is suspected in sub-grade, subsoil or topsoil surfaces, these should be ripped as necessary to decompact and ensure adequate drainage.
- ii. Hand cultivations shall be carried out to achieve the required finish on areas where machine cultivation is impossible ie adjacent to kerbs, manholes and footpath junctions, around retained trees etc. Surplus plant matter, rubbish and surface stones having any dimension greater than 25 mm shall be collected and removed from the site. Topsoil and subsoil is to be stored in heaps, maximum of 2m in height, providing soil is reasonably dry and friable during stripping and handling - using a tracked excavator. To protect from wet weather once final height is achieved, an excavator should regrade the sides and top of stockpile to firm surface by tracking across it to form a smooth gradient.
- iii. Final topsoil depth (allowing for settlement) to be 300mm for tree pits and general planting areas and 150mm for grass. Finished soil levels to be 25mm above/below adjoining paving or kerbs: not less than 150mm below dpc of adjoining buildings; shrub areas to be higher than adjoining grass areas by 25 mm. Topsoil to be spread in lightly compacted layers, max. 150mm depth, gently firm each layer before spreading the next.

12. Plant handling and establishment.

Plant handling shall be in accordance with 'Handling and establishing landscape plants', published by the CPSE through the JCLI. (https://www.csdhub.com/wp-content/uploads/2014/12/The-National -Plant-Specification-Handling-and-Establishment.pdf). The contractor shall comply with Part 3: Recommendations for plant handling from delivery to site to ensure successful establishment.

13. General planting notes.

Details for tree, hedge and general planting to be finalised once final site conditions are known (i.e. compaction and permeability of ground). General plant stock to conform to BS 3936, advanced nursery stock to BS 8545, and planting to BS 4428. Plants shall be first class examples of their species or variety, free from all pests and diseases, with good fibrous root systems and materially undamaged. All planting operations to be in general compliance with BS4428: 'Code of Practice for

general landscape operations'. Only carry out all planting while soil and weather conditions are suitable:

•Do not plant during periods of frost or strong winds. Plant only during the following periods •Container grown plants: At any time if ground and weather conditions are

favourable. Ensure that adequate watering is provided Setting out of planting beds to be approved by Landscape Architect before work commences. Ensure that plant beds are neatly defined, and rise from adjacent paved areas as specified above. All tree pits, tree circles in lawn and planting beds are to be mulched with approved bark mulch to 75mm depth after planting.

14. Plant biosecurity

Plant procurement should follow the latest recommendations from DEFRA and landscape contractors should verify the status of all specified species prior to procuring. Plant material should be sourced from UK growers with a sound Biosecurity Policy and management systems that can demonstrate the traceability of their stock with plant health certificates / plant passports or other documentation (commensurate with the HTA Plant Health Assurance Scheme (still in development phase)).

Selected plants, including trees should be propagated and grown on a UK nursery, or containerised and grown-on in the UK for a minimum of 5 years (trees) or 2 years (shrubs). Any Xylella host plants specified must come from a UK nursery and must not be imported from Europe or anywhere else in the world, directly to site. There must be full traceability on the Xylella host plants (ideally back to its origin). The contractor is responsible for checking compliance of growers and to submit their own Biosecurity Plan with their tender.

15. Shrub and ground cover planting.

All plants to be planted into cultivated planting beds (with 300mm depth specified topsoil) at densities shown in plant schedule, backfilled with same topsoil. Fertiliser to be incorporated as required to ensure establishment and continued thriving of plants - type and application rate to be determined by analysis.

- 16. Maintenance. Maintenance from Practical Completion to include weed control, watering and replacement of failures to original specification in the planting season following failure.
- i. All plant material to receive annual pruning and hedges and groundcover to be trained and edged with suggested 2 trims per year.
- ii. Check tree stakes and ties annually and after strong winds.

Proposed infill planting to be selected from the following

<u>Shrubs</u>

Botanical Name	Common Name	Specification	Density	
Eleagnus x ebbingei	Ebbings Silverberry	3I CG	3/m2	
Lonicera nitida 'Maygreen'	Honeysuckle 'Maygreen'	3I CG	3/m2	
Pachysandra terminalis	Japanese spurge	3I CG	4/m2	

