JAMES BLAKE
ASSOCIATES

GENERAL LANDSCAPE SPECIFICATION

FOR HARD & SOFT LANDSCAPE WORKS AT

FOR THE SITE AT

Harefield Grove, Uxbridge, Middlesex

REF JBA 20/027 - SP1
Rev

ON BEHALF OF
Comer Homes

September 2023

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Landscape Design
Landscape Planning
Urban Design
Ecology
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Arboriculture
Land Adoption
Weed Eradication

Contents

1.0 PROJECT PARTICULARS

1.1. NAME, NATURE AND LOCATION OF PROJECT

This document provides the specification for the hard and soft landscape works and maintenance of the wider landscape grounds and woodland, rose parterre, kitchen garden, orchard terrace, general landscaping and associated trees, shrubs and herbaceous perennials.

1.2. CONTRACT DOCUMENTS AND DRAWINGS

Accompanying this specification, the following drawings apply:

Detailed Soft Landscape Proposals Drawing No. JBA 20/027-06 to 10, Detailed Hard Landscape Proposals Drawing No. JBA 20/027-01 to 05, associated Measured Works Schedule and Boardwalk Construction Detail JBA 20/027-DT01.

This specification document is written to set out the standards and quality of workmanship and materials required for the hard and soft landscape provision for the area affected by the construction of the proposed Hard and Soft Landscape in accordance with the above plans. Some hard landscape elements are constructed by the developer and are therefore not specified within this document.

1.2.1. This specification should be referred to before pricing the works. Any matters that are unclear or require further definition or explanation shall be referred directly to Comer Homes whom shall be given reasonable notice of the information required (minimum of 5 working days). The tendering Landscape Subcontractor is deemed to have made all necessary enquiries before submitting their tender and no claims will be entertained from any Landscape Sub-Contractor for failure to acquaint themselves with the standards of workmanship and materials required once the tender has been submitted.

1.2.2. No variation whatsoever shall be allowed from the specification without prior agreement in writing before the return date for the submission of tenders. Variations shall be agreed entirely at Comer Homes discretion and no claims will be entertained for variations made without agreement, and then are subsequently rejected and require removal and rectification by the Landscape Sub-Contractor, entirely at his own expense.

1.3. THE PARTIES

1.3.1. The Employer: Comer Homes

1.3.2. The Developer: Comer Homes.

1.3.3. The Landscape Architect: James Blake Associates Ltd.

1.3.4. The Arboriculture Consultant: James Blake Associates Ltd.

1.3.5. The Ecology Consultant: James Blake Associates Ltd.

1.3.6. The Principal Designer is to be a representative of Comer Homes

1.4. PAYMENTS

Payments will be made following verification that the invoiced works are complete and have met the required standards of workmanship and materials. Verification may be confirmed or withheld by the Contract Administrator, following inspections, which will be carried out by Comer Homes or their consultants within 10 working days of notification to inspect. The Employer shall not be obliged to make payment in respect of any tax invoice where the work is not so verified by the Contract Administrator.

1.5. RETENTION

No retention will be held generally, but retention may be imposed on payments in accordance with the contract terms and conditions or in the event of poor performance in the sole opinion of the Contract Administrator.

1.6. DEFECTS LIABILITY PERIOD

The Landscape Sub-Contractor shall be liable for defective work for a period of 12 months. The opinion of the Contract Administrator shall be final in determining which work is considered defective and which is not. Defective work shall be replaced within 14 days of receipt of written notification (unless seasonal issues prevent it – whereupon such works shall be carried out at the earliest possible juncture), and the Landscape Sub-Contractor shall ensure that the replacement work is to the standard required by this specification.

1.7. MALICIOUS DAMAGE OR THEFT

The Landscape Subcontractor shall record all loss or damage arising from any theft or malicious damage prior to inspections and furnish the Contract Administrator with this information at the same time as submitting their quotation / proforma invoice for verification. Failure to make proper records of damaged or stolen materials and works (through no fault of the Landscape Subcontractor) may result in such work being considered as defective, for the purposes of verification, and required to be made good at the Landscape Sub-Contractor's own expense.

1.8. GENERAL CONDITIONS

1.8.1. The Landscape Sub-Contractor shall carry out the works to the standard specified but, in any case, to a standard not less than that of the standard appropriate to the works, or any part thereof, laid down in the current requirements of the NHBC Standards, Building Regulations and relevant British Standards and Codes of Practice.

1.8.2. The Landscape Sub-Contractor is to comply with Comer Homes Health and Safety Policy, HSE Rules booklet and all current Health and Safety legislation at all times.

1.8.3. All Sub-Contractors and their employees are to be CSCS certified. As a minimum requirement they must be working towards certification with the deadline for achieving said certification being 6 months from the date of the sub-contract order.

1.8.4. All plant operators are to be CPCS certified (or certified under an equal and approved scheme). The Landscape Sub-Contractor is to provide COSHH assessments to the Site Manager/Principal Contractor for all substances used during the undertaking of the sub-contract.

1.8.5. Comer Homes operates a strict Customer Care and Environmental Policy; all Sub-Contractors and their operatives must comply with this policy.

Safety Lines

In particular, we draw your attention to the need to prevent:

- Personal injury by ensuring all operatives wear safety helmets, safety footwear and high visibility clothing at all times.
- Striking underground services by checking plans, the use of cable avoidance tools, safe digging practices, permits to dig etc.
- Health risks by providing COSHH assessments to all operatives particularly for any pesticides, herbicides etc.
- Hand injuries by providing suitable gloves to all operatives.
- Slips and trips by keeping the workplace clean and tidy.
- Back injury by avoiding unnecessary handling, - use of mechanical aids e.g., forklift trucks, vacuum lifters, training operatives in safe lifting techniques etc.
- The inhalation of any fumes, vapours etc by providing suitable respiratory protection. Face fit testing will be required.
- Dermatitis or other skin conditions by providing suitable protective clothing.
- Hand arm vibration by changing the work method, checking manufacturers' information, the use of low vibration tools, carry out routine maintenance, reduce time exposure, monitor exposure, operatives to wear warm gloves even in summer, carry out health surveillance etc.
- Noise induced hearing loss by changing the work method, use of quieter equipment; quieten the noise at source e.g fit mufflers on breakers, set up exclusion zones, PPE etc.

1.8.6. The Landscape Sub-Contractor is responsible for removal of rubbish and cleanliness during and on completion of their sub-contract. All rubbish should be taken to an appropriate skip. The Landscape Sub-Contractor should at all times adhere to Comer Homes waste management policy and must allow for segregating their waste on site as so directed. The burning of waste material will not be allowed on site.

1.8.7. On the site where the work is in progress, the Landscape Sub-Contractor must maintain a competent foreman or chargehand who has complete control of all labour engaged on the work. Any instruction given to such foreman or

chargehand shall be deemed to have been given to the Landscape Sub-Contractor.

1.8.8. Where the Landscape Sub-Contractor is to supply materials, they are to ensure that the materials used conform the Local Authority's requirements.

1.8.9. The Landscape Sub-Contractor is to supply all necessary labour, materials and plant to complete the landscaping works as detailed on, and in accordance with, the landscaping layout and specification.

1.8.10. The whole of the work is to be carried out by experienced landscapers in accordance with best horticultural practices, the Control of Pesticides Regulations and to the satisfaction of the Contract Administrator.

1.8.11. Before work starts the Landscape, Sub-Contractor is to:

- Check the statutory service plans;
- Carry out a cable/ pipe/ duct avoidance survey where work is within an area Comer Homes have not been in control of;
- Obtain a permit to dig from the Site Manager.

1.8.12. The Landscape Sub-Contractor is to liaise with the Site Manager, on a daily basis, to agree the programme of works. If the desired programme cannot be achieved (e.g., if the weather conditions will cause soil compaction) – such remedial works as can be carried out to make the site tidy shall be agreed and carried out, until conditions improve.

1.8.13. Comer Homes Site Manager will undertake periodic checks on progress and workmanship with possible additional inspection by the landscape architect to ensure all planting has been carried out in accordance with the layout and specification. Any variance to the layout / specification must be highlighted by the Site Manager or Landscape Architect (or if any disagreement arises, then the sole opinion of Comer Homes will be binding), and any defective works will be put right at the Sub-Contractor's expense, unless it can be demonstrated that the defect has been caused by others (other site personnel or by people associated with the school). Defective work shall be made good at the Landscape Sub-Contractor's own expense within 21 days of being identified (or other shorter time frame as agreed), or a suitable sum will be deducted from any sums owing.

No additional works shall be verified for payment unless the Landscape Sub-Contractor has received a written instruction to proceed with such works, having first agreed a fee.

1.8.14. Allowance should be made to provide container grown trees/plants when planting out of season.

1.9. MATERIALS

1.9.1. Comer Homes is committed to the responsible purchasing of forest products. The long-term intention is to ensure that all forest products specified, or

purchased, by Comer Homes are sourced from well-managed forests that have been certified to credible certification standards (FSC) and have **full** Chain of Custody certification.

1.9.2. The Landscape Sub-Contractor is to have a viable environmental policy in place to ensure that, wherever possible, sustainable and certified materials are purchased and incorporated into the sub-contract works. The Landscape Sub-Contractor will continually assess the environmental effects of their materials, products, policies and operations with a view to reducing and controlling environmental impact.

2.0 SPECIFICATION FOR SOFT & INCIDENTAL HARD WORKS

2.1. GENERAL REQUIREMENTS AND STANDARDS

2.1.1. QUANTITIES:

The quantities given are approximate, requiring tenderers to give fixed rates regardless of possible variations required on site. Tenderers shall not vary quantities specified without written letter of instruction, or other form of variation order from the Employer, or their agents (most notably Comer Homes consultant Landscape Architect), irrespective of verbal comments received from any party. The Employer will not be liable for the cost of any additional works carried out without such written instruction being issued.

2.1.2. BRAND NAMES:

References to brand names shall mean any similar product that is suitable, equal and approved by the Employer, or their agents, prior to submission of this priced tender document. Viable alternatives shall be approved by Comer Homes following representative samples being submitted.

2.1.3. PESTICIDES AND HERBICIDES:

Generally pesticides shall not be used on this site in case of ecologically sensitive areas, unless and where agreed in writing by Comer Homes. Where reference to the use of pesticides is made in this document, the following procedures shall be followed and regulations complied with. DO NOT HERBICIDE WITHIN CLOSE PROXIMITY OF A WATERCOURSE The use of all pesticides should only be made following a risk assessment to consider potential effects on the environment and on human health. The purchase, transport and storage of herbicides are regulated by Part III of the Food and Environment Protection Act 1985, Control of Pesticides (Amendment) Regulations 1997; the Health and Safety at Work Act 1974; the latest COSHH Regulations (2005), the product COSHH sheet and EC Directive 91/414/EEC (the “Authorization Directive”) and the Plant Protection Products Regulations 1995 as amended by the Plant Protection Products (Basic Conditions) Regulations 1997. Where possible the nursery should confirm that all plants have not been treated with Neonicotinoids class of insecticides. All herbicides must have an appropriate full or “off-label” approval for use in a relevant situation. Refer to the Pesticide Safety Directive, for which the website is given here for your assistance:- www.pesticides.gov.uk. All pesticides shall be applied in suitable calm weather conditions, and allow for repeat spraying as required to achieve a complete kill. Herbicides and other pesticides shall be applied by skilled and qualified operatives with all required and current licences and certificates.

2.1.4. MAKING GOOD:

The Landscape Sub-consultant shall include for making good any structures and surfaces disturbed for all items. Include for general tidying and for litter and debris clearance at each and every site visit to leave the site always in a

tidy condition. All arisings shall be removed to an approved and licensed tipping site for disposal, except for those required by Comer Homes for retention on site. The arisings to be retained on site shall be agreed at the pre-contract meeting.

2.2. DEMOLITIONS AND PREPARATORY WORK

2.2.1. REMOVAL OF SURPLUS MATERIALS AND DEBRIS

The Landscape Sub-consultant shall include within the rates for all items the removal from site of any surplus materials and debris to suitable store, tip or location agreed with the Contract Administrator. Furthermore, the Landscape Sub-consultant shall include within the rates for all items breaking up, grubbing out, and loading up materials, rubbish, extraneous materials and general debris.

2.2.2. SAFETY AND AVOIDANCE OF NUISANCE

The Landscape Sub-consultant shall ensure the safety of both the works and members of the public, and further ensure the avoidance of nuisance and inconvenience to members of the public and adjoining owners or residents by suitable practices, methods and programming of works on site. Rates and prices tendered shall have included for all necessary measures to this end.

2.2.3. LEVELS

The Landscape Sub-consultant shall check and agree with the Employer levels on site. Changes to proposed levels shall be discussed with the Employer (or their agents) and agreement shall have been obtained on such levels before any works are carried out. Any works carried out without such agreement and are subsequently rejected by the Employer or their agents shall be rectified by the Landscape Sub-Contractor at his own expense. No adjustment shall be made in respect of specified soil recesses in respect of the bed edges.

2.2.4. REMOVAL OF SURPLUS MATERIALS AND DEBRIS

The Landscape Sub-contractor shall include for in all items the removal from site of all surplus materials and debris. They shall also include for all items the breaking up, grubbing out, loading up materials, rubbish, extraneous materials, brick, stone, concrete and general debris where required.

2.2.5. PLANT, SHORING ETC.

The Landscape Sub-Contractor shall include for in all items taking out, taking down, cutting openings, etc. where required. This shall include for all necessary plant, shoring, temporary supports, scaffolding, etc.

2.2.6. PAVINGS AND CARRIAGEWAYS

Where directed, redundant carriageways, footpaths and paved areas of whatever construction, shall be broken out by the Landscape Sub-Contractor, including hard-core, to a minimum depth of 300mm, to include hand work etc. around all cables, ducts, manholes, stopcocks, underground services, gulleys and gratings etc.

2.2.7. EXCAVATING AND FILLING

To be read with Preliminaries/General Conditions

2.2.8. SETTING OUT

The Landscape Subcontractor shall satisfy themselves that the existing ground levels as indicated on the Drawings or schedules of cross section levels are correct.

The line of levels shall be carefully set out by the Landscape Sub-Contractor, frequently checked and maintained throughout the works. If directed, realignment of setting out to the Landscape Architects' requirements shall be carried out by the Landscape Sub-Contractor, and should be allowed for in the rates for construction work; no additional payment will be made.

Errors arising from inaccurate setting out shall be made good by the Landscape Sub-Contractor at their own expense.

2.2.9. COMPACTION OF SOILS/HAUL ROUTES AND WORKING AREA

- Areas drawn as soft landscape (grass, trees, shrubs etc.) must not become compacted by the Landscape Sub-Contractor's operations;
- The Landscape Sub-Contractor shall plan all haul routes and working areas, avoiding areas of soft landscape wherever possible;
- Where compaction occurs the Landscape Sub-Contractor shall alleviate it in areas of soft landscape by machine digging to a depth of 600mm or the full depth of soil, whichever is the lesser;
- Upon completion it must be possible to insert a soil auger by hand to a depth of 600mm or the full depth into the soil;

2.2.10. EXISTING SERVICES

It shall be the responsibility of the Landscape Sub-Contractor to ascertain the location of any live water, gas, electricity or telecom services and to protect these at all times.

The Landscape Sub-Contractor is required to ensure that any root barriers included in the scheme have been implemented as part of the Groundworks contract and to notify the Employer where they are absent or in an incorrect position. The Landscape Sub-Contractor must ensure that there is no damage to root barriers during excavation. Any damage to root barriers caused by the Landscape Sub-Contractor must be rectified at their own expense.

2.2.11. SITE FEATURES

- Before starting work, the Landscape Sub-Contractor shall verify with the Contract Administrator which existing fences, gates, walls, roads, paved areas and other site features are to be retained or removed.
- Any damage to existing structures, vegetation, watercourses or paving caused by the Landscape Sub-Contractor in the course of, or in consequence of, their operations shall be made good at their own expense.
- The Landscape Sub-Contractor shall take care to prevent any contamination of either topsoil or watercourses by clay, subsoil, fuel oil, chemicals, and debris of any kind during the course of the works.

2.2.12. EXISTING TREES AND WOODLAND

- **NO EXISTING TREE, VEGETATION, GROUND FLORA OR SHRUB TO BE REMOVED** unless specifically agreed ON SITE with the Employer;
- All trees, vegetation, ground flora and shrubs to be retained in the area of the construction works shall be protected from damage during the course of works with fencing erected by Comer Homes in accordance with the Tree Protection Plan drawn up by James Blake Associates Arboricultural Consultant;
- No work or trafficking shall take place within 3.0m of the branch spread of existing trees before protective fencing is erected;
- No materials, fill or topsoil shall be stored under or near to existing trees;
- The Landscape Sub-Contractor shall be liable for making good, compensation or replacement as appropriate for any damage to existing trees caused by their activities on site, as directed by the Employer;
- Before starting work, the Sub-Contractor carrying out the work shall verify with the Contract Administrator which trees, shrubs and hedges are to removed. They shall cut down the trees and shrubs to be removed, grub up stumps and main roots over 50mm diameter and fill voids with approved material. All arisings shall be disposed of appropriately.

2.2.13. CREATION OF SCALLOPPED EDGES TO EXISTING WOODLAND

- **NO EXISTING TREE, VEGETATION, GROUND FLORA OR SHRUB TO BE REMOVED** unless specifically agreed ON SITE with the Employer;
- Woodland edges, as illustrated on the Landscape Strategy Plan JBA 20/027 SK02, to be scalloped to increase woodland edge habitat. These ‘D’ shaped scallops should be at least 50m long and 15m depth. Mature trees such as oak will be retained and areas of scrub, majority laurel, will be cut back. Areas of scrub / overgrown laurels to be cut to ground level, with stump and roots dug out, either by hand if within 5m of existing mature tree, or root stump ground out, to be agreed on site with the Contract Administrator and advice of suitably qualified Arborist.

- Existing leaf litter to be raked up and removed from newly created scalloped edges, to be spread elsewhere within the woodland. This is required as laurel leaves inhibit growth of other ground flora.
- This will increase light levels to the woodland floor and existing trees and enable restoration of the woodland floor.
- Ground flora to include bulbs and plugs to be planted as specified in accordance with JBA 20/027 -06 to10 detailed soft landscape proposals. To be overseeded with wildflower grass seed. Refer to bulb and grass seeding sections below for further details.

2.2.14. SCRUB CLEARANCE ALONG WOODLAND WALKS

- **NO EXISTING TREE, VEGETATION, GROUND FLORA OR SHRUB TO BE REMOVED** unless specifically agreed ON SITE with the Employer;
- Woodland walks, as illustrated on the Detailed Soft Landscape Proposals JBA 20/027 -06 to 10, to allow a wide ride through the existing mature trees of the woodland along a compacted earth / natural bark path. These rides shall be approximately 5m wide. Mature trees such as oak will be retained and areas of scrub, majority laurel, will be cut back. Areas of scrub / overgrown laurels to be cut to ground level, with stump and roots **left in situ**, to reduce disturbance to woodland soil ecosystem.
- All arisings to be spread within the woodland, typically either side of the pathway route.
- This will increase light levels to the woodland floor and allow views along the path and to view the large mature tree specimens of the woodland.

2.2.15. DEBRIS CLEARANCE

- The Landscape Sub-Contractor shall remove the following materials, from the surface or sticking out of the surface, of the site:
  - All sheet material;
  - All pipes, rods, bars and bands;
  - All timber objects;
  - All canisters and containers.
  - All arisings shall be removed from site.

2.3. EXCAVATING

2.3.1. MATERIALS ARISING

Materials of any kind obtained from the excavation shall remain the property of the Employer, such material shall be dealt with as provided in the contract but the Contract Administrator shall have power to direct its use in the works or disposal by other means.

2.3.2. TOPSOIL

Topsoil and regrading across the site has been carried out to remove the previously existing topsoil. Before beginning any further general excavation or filling, topsoil shall be excavated from required areas to an average depth of 300mm. The excavated topsoil has been retained on the wider site for use and should be kept separate from excavated subsoil.

2.3.3. TOPSOIL HANDLING

Topsoil for re-use shall be handled in a manner consistent with the preservation of a good crumb structure of the soil. Soil being stripped or stacked shall not be handled when wet or during wet conditions. Compaction shall be kept to a minimum. No heavy machinery shall be driven over these stockpiles.

2.3.4. UNRECORDED FEATURES

Where old foundations, beds, basements, filling, tanks, service pipes, drains etc. not shown on the drawings are encountered, obtain instructions from the Contract Administrator before proceeding.

2.4. DISPOSAL OF MATERIALS

2.4.1. TOPSOIL

It is understood the site won excavated topsoil has been stockpiled and preserved in temporary spoil heaps in agreed locations on site.

2.4.2. SUBSOIL

It is understood the excavated topsoil has been stockpiled and preserved in temporary spoil heaps in agreed locations on site.

2.4.3. SOIL STOCKPILES

Where topsoil has been stockpiled it is advised the following methods or similar are in place before sourcing and supplying on site: -

- Dry topsoil is to be transported to the agreed storage area and loose tipped in a line of heaps to form a windrow.
- Soils to be stockpiles shall be stored in piles no greater than 1.5m high
- No tracked or wheeled machinery shall be allowed on or over the stockpile.
- The stockpile shall be shaped so as to shed water. This can be achieved using the blade/bucket on an excavator to regrade the side and top of the stockpile to firm the surface to form a smooth gradient. The aim is to seal in the dry topsoil and reduce rainfall infiltration.
- Stockpile positions must be agreed with the Contract Administrator and shall not be relocated without authorisation from the Contract Administrator.
- Stockpiles shall be kept weed free with appropriate herbicide. If the topsoil is to be stored for more than 3 months, an appropriate seed mix should be sown over the side and top to stabilise the surface to reduce the risk of erosion.

- Once the stockpile has been completed, the area should be cordoned off with secure fencing to prevent any disturbance or contamination by other construction activities.

2.4.4. CHEMICAL HERBICIDES AND PESTICIDES

All work involving chemicals including supply, transport, storage, handling, equipment, application, cleaning of equipment and disposal of waste chemicals and containers, shall comply with current legislation and HSE recommendations. Chemical herbicides or pesticides used for any purpose within this contract shall only be supplied or handled by personnel holding an appropriate National Proficiency Tests Council certificate of competence for pesticide application. Records must be kept of all operations involving the application of herbicides and or pesticides. Full copies of these records must be sent to the Contract Administrator upon completion of each application.

Chemicals supplied must be in accordance with the current BAA approved list, appropriate for the job in hand and must be applied strictly in accordance with the manufacturer's directions, with particular attention to application rates and times of year of application. Waste pesticides or containers shall be disposed of off-site, including any un-used materials.

All work involving the use of pesticides shall comply with the Code of Practice for using plant protection products (prepared by the Department for Environment, Food and Rural affairs (DEFRA) the Health and Safety Commission (HSC) and the National Assembly for Wales Environment, Planning and Countryside Department in 2006.

2.4.5. SURPLUS EXCAVATED SOIL

Spread and level on site as directed by the Contract Administrator in locations no more than 1000m from site of excavation.

2.5. FILLING

2.5.1. Generally, there should be no need for any landscape fill, shallow fill, medium depth fill and deep fill. However, if required, the specifications should be agreed in full with the Contract Administrator before any filling takes place.

- Subsoil only may be used - to specification.
- Fill/soil shall be capable of sustaining good plant growth and be free draining.
- It shall exclude the following:

- Any potentially leachiate or landfill gas generating material such as: material from marshes or bogs, peat, timber, logs, stumps, plant waste, slurry, plaster, felt or other perishable or toxic materials.
- Material susceptible to spontaneous combustion.
- Materials with excessive moisture content.
- Material contaminated with oil, diesel, petrol, or any other substance toxic to plant growth, animals or humans.
- Over 30% lime mortar.
- Wire or steel reinforcement, brick, scalpings, tarmac, or other demolition waste.
- Sheet material.
- Asbestos or contaminated waste.

2.5.2. SHALLOW FILL/SOIL

- Depth: 200mm-500mm below final levels.
- pH: 5.5-7.5
- Maximum size of ‘stone’ in any direction: 100mm (e.g. half bricks)
- Maximum % of stones in 100-500mm range: 25%
- Electrical conductivity: below 1500 micromhos per cm in 1:2.5 soil: water extract.
- Available Phosphorus (P): not less than 70ppm when extracted with 4.2% NaHCO3 at pH 8.5.
- Available Potassium (K): not less than 300ppm when extracted with 8% ammonium nitrate.
- Free of weed seeds, roots of perennial weeds, sticks, wire, steel reinforcement, plastic, paper.
- Obtain approval from the Contract Administrator prior to use.

2.5.3. MEDIUM DEPTH FILL/SOIL

- Depth: 500mm – 1.0m below final levels.
- PH: 5.5-7.5
- Maximum size of ‘stone’ in any direction: 50mm (e.g. smaller than half bricks)
- Maximum % of stones in 250-300mm range: 25%
- Free of roots of perennial weeds, sticks, wire, steel reinforcement, plastic, paper.
- Obtain approval from the Contract Administrator of a sample of material prior to use.

2.5.4. DEEP FILL/SUBSOIL

- Depth: Deeper than 1.0m
- PH: 5.0-7.5
- Obtain approval from the Contract Administrator of a sample of material prior to use.

2.6. HARD LANDSCAPE MATERIALS AND WORKS

2.6.1. GENERALLY

Clarify with the Employer the requirement to carry out hard landscape works before allowing for the following clauses. In the case of unusual or specialist circumstances, requiring the Landscape Subcontractor to undertake limited hard landscape operations as part of a whole task in hand (such as loose fill gravel infill or an informal gravel area or gravel or bark path across a green space or through a woodland), then ensure allowance is made for the requirements and instructions given.

2.6.2. SAND FOR MORTAR

Sand for mortar shall comply with BS 1200. To be clean sharp sand containing not more than 3% by weight passing through a 63-Micron BS Sieve and not more than 10% be weight retained on a 5 mm BS Sieve.

2.6.3. SAND FOR LAYING

Sand for laying shall be clean sharp sand containing not more than 3% by weight passing through a 63 micron BS sieve and not more than 10% of weight retained on a 5 mm BS sieve.

2.6.4. CEMENT

Cement to be BS EN 197-1:2011 Cement. Composition, specifications and conformity criteria for common cements (Incorporating corrigenda November 2011, October 2015 and February 2019)

2.6.5. WATER

Water shall be from the mains and kept free of any impurities.

2.6.6. STORAGE OF MATERIAL

A) Cements and limes shall be stored separately, kept dry and used in rotation of deliveries.

B) Sands shall be stored separately according to type, on clean, hard, dry standings and protected from contamination.

C) Sands for pointing shall be stored separately away from all other sands and shall be obtained in sufficient quantity at one time to enable material of the approved colour to be used for the whole of the work.

2.6.7. SAMPLES

Submit samples of each type of paving unit at random from the initial loads to the Contract Administrator for approval. Ensure that subsequent deliveries match approved samples.

2.6.8. HANDLING

Unload and handle paving units with care and reject those soiled, chipped or otherwise damaged. Unload and handle packaged bricks with proper mechanical plant.

2.6.9. STORING BRICKS, BLOCKS AND SETTS

Stack on level hard standing and protect. Paving, blocks and setts shall be properly stacked on level and hard standing and protected from inclement weather.

2.6.10. PAVED SURFACE

All surfaces on which paving is to be laid shall be clean. All paved areas shall be finished to true, running even falls without any deviation greater that 6mm from a 3 m straight edge, nor shall the level between adjacent unit pavers differ by more than 3 mm. Care must be taken to avoid damage to completed works during subsequent operations. Any spoiled work shall be taken up and replaced at the Contractor's expense.

2.6.11. KERBS, EDGINGS AND CHANNELS

Kerbs, edgings and channels shall be bedded and jointed in cement mortar (1:3) to true lines and levels on a C:20:P mix concrete foundation unless otherwise shown and shall be haunched with similar concrete. The front face of the concrete foundations shall be truly vertical. Lines of kerbs and channels shall have expansion joints at intervals as directed.

2.6.12. LAYING OF SUB-BASE OR BASE COURSE

Prior to laying sub-base or base courses the surface shall be treated where directed with approved herbicide applied in accordance with manufacturer's instructions.

2.6.13. COMPACTION OF BLOCKS AND BRICKS

Compaction of blocks and bricks where bedded on sand shall be by means of a vibrating plate compactor with rigid base plate all in accordance with the paving manufacturer's instructions, taking care to prevent drainage problems arising.

2.6.14. LAYING OF PAVINGS

All paving shall be laid to levels and falls as directed by the relevant drawings, to ensure even running levels and falls sufficient for drainage of surface water run-off.

2.6.15. PROTECTION AGAINST PREMATURE USE

Do not allow traffic on paving until 4 days after completion.

2.6.16. TIMBER FORMWORK FOR FOOTINGS AND FOUNDATIONS

Concrete footings and foundations spread into soft areas and close off access to soil for shrubs and trees intended for narrow beds in paved areas: To prevent concrete spread, foundations shall be controlled using timber formwork, where they are adjacent to a soft landscaped area. Timber for formwork shall be of properly cleated softwood, wrought where required to be in contact with all faces of concrete which are to be exposed or of approved metal forms or hardwood, so as to give a smooth finished appearance to the concrete.

2.6.17. TIMBER EDGING

The edgings to hoggin surfaces shall be constructed using cut lengths of sawn softwood edging board, 100 x 38mm nailed to 50mm square, 600mm long soft wood stakes at 1.5m centres (or closer if required at junctions) using 2 No. flat-headed galvanized nails. All timber shall be pressure treated with Tanalith E or similar and approved - brown finish and shall be supplied with a coating of brown coloured stain Sadolin “Classic Walnut” to manufacturer’s instructions or similar approved.

For curves greater than a 4m radius, cut grooves along the back of the board at 50mm c/s with a saw to achieve a smooth bend (grooves on the inside of the bend). Where edgings involve curves less than 4m radius use stainless steel strips, 100 x 3 x 2000mm. Fix all timber and metal edgings to 50 x 50 x 450mm, pressure treated timber stakes (as above), driven into the ground to below finished levels, at 1000mm centres. Timber boards or metal strips shall be secured to stakes by twice nailing with galvanised flat-headed nails. Metal edgings will require pre-drilling and the use of non-rust screws, instead of the nails.

2.6.18. HARDCORE BASE COURSES

A) LAYING AND COMPACTING

Spread hard-core evenly over existing compacted sub-base avoiding damage thereto, and thoroughly blind top surface with sharp sand. Compact in 150mm maximum layers to specified thickness using a 105 kg vibrating roller with a minimum number of 6 passes and until movement under roller ceases.

B) FITTINGS AND COVERS

Ensure proper compaction around drains, edge restraints, manholes and service covers.

C) PERMISSIBLE DEVIATIONS

From required levels to be:-

i) For road base + 10 mm to - 15 mm

Any point under a 3000mm straight edge not to exceed 15 mm.

D) LAY TO FALLS

As indicated for finished surface falls to levels and drainage points or lines.

2.7. HARD SURFACING

2.7.1. MACADAM ROADS, FOOTPATHS AND PARKING: To Engineers Specification or below if required:-

Roadways and footpaths to be Bitumen Macadam with 6mm gauge aggregate wearing course to be laid over 20mm gauge aggregate base course, all laid over base course of hardcore, all depths to Engineer's specification, laid over firmed sub-grade and geotextile - Terram 1000, all to falls and crossfalls, minimum 1:70 and all to Highway's Authority approval.

Where specified within Section 278/Section 38 area, to be laid in accordance with proposed engineering specification provided as part of the Section 278/Section 38 construction details.

2.7.2. KERB TO ROADS AND CAR PARKS INCLUDING DROPPING AND DROPPED KERBS TO CROSSOVERS AND TRANSITION KERBS: To Engineers Specification or below if required:-

Excavate and cart away trench for kerbs to a depth of approximately. Level, grade and consolidate the existing sub grade to proposed profile and to falls of 1:100. Supply and lay standard precast concrete kerb units 125 x 150 x 914mm, set upright, available from Marshalls Ltd. Tel (03300 574455) , or other similar and approved, colour “grey.” Lay kerb units into prepared 450 x 350mm C:20:P mix insitu concrete strip foundations in accordance with manufacturers recommendations, over well prepared sub grade – as specified above.

Kerbs to be laid 125mm proud of surfacing (max tolerance +-25mm). Include for laying standard precast concrete dropping kerbs and dropped kerbs to pedestrian crossovers, ensuring a 0-6mm bull-nosed up-stand to dropped kerbs. Where kerbs meet half battered road kerbs, include for transition kerbs (to be ordered 12 weeks in advance). Include for making good structures and surfaces disturbed. Upstanding kerbs shall be used for all other areas of the car parks, heights above car park surface to vary according to drainage falls of paving, but to average 125mm. Include for making good structures and surfaces disturbed.

Where specified within Section 278,Section 38 area, to be laid in accordance with proposed engineering specification provided as part of the Section 278/Section 38 construction details.

2.7.3. P.C.C EDGING: To Engineers Specification or below if required:-

Pour concrete strip foundation using C:20:P mix 200 x 150mm, haunched. Butt joint edging units with dry mix cement and kiln dried sand (1:5) over bed of 1:3 mix cement mortar over C:20:P concrete strip foundation. Butt joint edging units 50 x 150 x 914mm, flat topped and laid flush with paving and brush kiln-dried sand cement mix 1:5 into the joints following laying of units. Where proposed in the section 278 area, to be laid in accordance with proposed engineering specification provided as part of the Section 278 construction details.

2.7.4. SLAB PAVING: To Client or Engineers Specification or below if required:-

2.7.5. PORCELAIN SLAB PAVING;

Excavate and cart away area required for porcelain slab paving to a depth of approximately 260mm. Level, grade and consolidate the existing sub grade to proposed profile and to falls of 1:100 and cross-falls of 1:60 (subject to crossover falls). Lay 600 x 600 x 20mm lightly textured finish, Colour 'Grey', Slab type to be 'Eclipse Lunar', available from Brett, or similar and approved. To be dry laid in Stack bond, over wet screed of 1:5 mix to a depth of 150mm over firmed sub-grade, all to falls and crossfalls, minimum 1:70. Slabs to be butt jointed, with kiln dried silver sand brushed well into joints. Allow for any excavation and carting away of spoil to achieve finished levels. Include for making good structures and surfaces disturbed to match.

2.7.6. CONCRETE BLOCK PAVING; 140 x 210 x 60mm, Type ALPHA ANTIQUE TUMBLED BLOCK PAVING; Colour "SILVER HAZE", available from Brett, or similar and approved. To be dry laid in Random stretcher bond, over 50mm sharp sand bed, over 150mm of suitable granular fill, over firmed subgrade, all to falls and crossfalls, minimum 1:60.

2.7.7. CONCRETE BLOCK PAVING - EDGING, (60mm depth for pedestrian areas, 80mm depth for vehicular areas). 140mm wide, Type ALPHA ANTIQUE TUMBLED BLOCK PAVING; Colour "SILVER HAZE", available from Brett, or similar and approved. To be laid in double staggered string course, using blocks 140 x 140mm, laid over 100mm cement mortar bed, 1:3 mix, haunched, all laid over 250 x 150mm C:20:P mix initu concrete strip foundation.

2.7.8. REINFORCED GRAVEL CAR PARKING BAYS AND ROAD WAYS: All to Engineers specification or as required as set out below. All works within existing tree root protection area to be supervised by a qualified Arborist.

2.7.9. Lay porous geotextile fabric - Terram 1000 over the consolidated sub base. Secure with Steel Fixing U-Pins 170mm x 170mm x 6mm, PRODUCT CODE: 150WW8010-PER-PIN available from www.green-tech.co.uk or similar and approved. Lay a lightly compacted layer of MOT Type 1, 200mm depth, granular sub base. Lay an open textured porous macadam, 20mm gauge, 70mm depth. Lay trays of Cellweb, available from Geosyn, Tel: 01455 617 139 and connect as per manufacturers instructions. Spread washed rounded, buff coloured

gravel 20mm gauge, 40mm depth, finished 15mm below adjacent surfaces as shown and in locations in accordance with JBA 20/027-06 to 10.

2.7.10. HOGGIN/SELF BINDING SURFACES: PROPOSED PATHS

Self-binding surface to be made up of a suitable mix of gravel, sand and clay to give a smooth durable surface with a minimum of 85% weight passing a 10mm BS Sieve. Sample to be made available onsite for future matching of deliveries. Sample shall first be approved by contract administrator. Subsequent deliveries shall match the sample agreed. No losses or claims shall be entertained for any deliveries that are rejected.

Self-binding surface shall comprise the following make up: MOT Type 1 granular sub base well compacted to 150mm, depth dependant on local ground conditions; 50mm deep wearing course of well consolidated hoggin. Subgrade shall be consolidated to falls and crossfalls. 'Terram' Geotextile membrane or similar and approved shall be supplied, laid and pegged down sufficiently to hold in place. 150mm depth of MOT Type 1 granular fill, well rolled and consolidated using a 500 kg vibrating roller shall be supplied and spread. Wearing course of well consolidated hoggin to a depth of 50mm shall be made up of a suitable mix of gravel, sand and clay to give a smooth durable surface with a minimum of 85% weight passing a 10mm BS Sieve. Top dressing shall be well rolled dry with 500kg vibrating roller, to falls and crossfalls, making up any areas of material segregation, then rolled again with a non-vibratory roller, whilst spraying water onto the roller, and not directly onto gravel surface. Top dressing shall be rolled until fines sufficiently floated to produce well-bonded surface.

All works within existing tree root protection area to be supervised by a qualified Arborist.

2.7.11. LAYING OF SELF-BINDING AND OTHER WATER BOUND PAVING SURFACINGS

All paving shall be laid to levels and falls as directed by the relevant drawings, to ensure even running levels and falls sufficient for drainage of surface water run-off. Loose gravel shall always be retained by adjacent edgings, with the surface of the gravel to have a minimum recess below adjacent edging of 15mm. Self-Binding gravel shall have a maximum longitudinal gradient of 1:12 and shall never be steeper than 1:20 unless agreed in advance with the Employer and/or Landscape Architect, with a maximum cross fall of 1:40.

2.7.12. TIMBER BOARDWALK SECTIONS

Installed at locations in accordance with drawing JBA 20/027-01 to 05 and Construction Detail JBA 20/027 - DT01.

Timber boardwalk as shown on plans and construction detail DT01, to be 1.5m wide and varying in height above ground from 0.27m to 1.6m, refer to plans. To be constructed from sustainably sourced and approved sources of timber.

All footpaths to and from the boardwalk sections shall be formed to match the boardwalk finished floor level. All levels of boardwalk will be reviewed and

confirmed with Client, Contract Administrator and Sub Contractor prior to final installation.

2.7.13. FALLS AND CROSSFALLS: To Engineers Specification or below if required:-

All paving surfaces shall be laid to suitable longitudinal and cross-falls. Ensure paving levels provide suitable and sufficient drainage. Ensure that falls allow surface water to run towards either proposed or existing drainage points or lines, or to soft surfaces without obstruction (as per the design layout or as otherwise agreed with the Employer). Import topsoil as required for marrying in levels – ensuring the topsoil quality is suitable in accordance with Section 2.5. Any costs associated with importing topsoil for marrying in levels adjacent to paving shall be carried out at the Landscape Subcontractors' own expense and rates for items below shall be deemed to have included such. Where specified with Section 278/38 area, to be laid in accordance with proposed engineering specification provided as part of the Section 278/38 construction details.

3.0 BOUNDARY TREATMENTS

3.1.1. POST AND RAIL FENCE

To site boundary to match existing if required;

Fencing shall comprise of sawn finished square section vertical posts 2100m high x 125mm x 75mm , with three horizontal square section rails. Prick posts in between the posts at the mid bay point to be included to give extra support. One post and one prick post for every 1800mm of fence shall be allowed, plus one post for the end of the run. Three rails per 1.8m run of 3-rail fence shall be allowed for. Horizontal bars 3600mm x 38mm x 100mm sawn finish square rail (Jakured).

Fixings to be 100mm galvanized wire nails approx. 79 per kg, code 800310 1kg, 800350 5 kg, 800300 25kg. Allow 13Kgs for 200m of 3-rail fence. All available from Jacksons Fencing tel. 0800408 2234 or similar and approved.

All visible timber to be treated with 1No. coat Sadolin Classic, colour 'Jacobean Walnut'.

3.1.2. 5 BAR METAL "ESTATE" RAILING: ESTATE RALING GATE – IF REQUIRED

To site boundary to match existing if required;

Excavate and cart away existing soil to form pits for insitu concrete footings, excavating pits of 600 x 400 x 400mm, after setting out post positions. Set posts into C:20:P mix concrete 500 x 400 x 400mm. 1100mm high, 5 horizontal bar "Estate Railings" 220mm above ground, with spot weld fixings of bars to posts, all to be finished hot dipped galvanised to BS EN ISO 1461 with great care to ensure that all galvanising smuts are removed before painting – to avoid cuts and injuries to children. Rails to be 5x19mm diameter CHS. Panels to 2000mm centres width and end panel trimmed to suit if required and bolted together using 2 No. M8 x 65 Lg coachbolt, Nut & Washer. Paint with 2 No. coats of Sika Icositt Highbuild 6630 paint, strictly in accordance with the manufacturers recommendations. Wash the galvanised mesh fencing surfaces with soap and water to remove the sulphates from the galvanising process, rinse off and allow to dry. Paint the cleaned and dry surface with the specified paint using a mini-roller (which spreads the paint more evenly and is easier to use than any other method) or alternatively electrostatic powder coat railings after galvanising (but if the latter is used, then any knocks, abrasions, shall be touched up with 3No. coats if the paint specified above.

4.0 STREET FURNITURE

4.1.1. TIMBER PERGOLA

To Clients requirements or if required as below;

Bespoke pergolas 2.7m high, located around the main dwellings. To span with width of the footpaths with posts 3m apart, and posts aligned 2m apart along the length of the pergola. Length of pergola to be as shown on plan. Utilise pressure treated and smooth planned timbers. Upright posts to be installed with either surface fixed footings to concrete slab paving with suitable secure bolts; or posts fixed into concrete footings with ground spike, depending upon location, hard surfacing or soft planted bed. End spans with approx. 300mm overhang to be shaped, along with support brackets to main upright posts.

4.1.2. TIMBER SEATS

Ergo Bench, Product code – SB5048 - By Miracle Design and Play Limited or similar approved. Installed with manufacturers fitting kit and to manufacturer's specification surface fixed to concrete slab paving with M10 bolts; Bench attached on top of in ground footings as per manufacturers specification.

4.1.3. PICNIC TABLE

SPIRIX PICNIC TABLE , Product code – SB5038 - By Miracle Design and Play Limited or similar approved. Installed with manufacturers fitting kit and to manufacturer's specification surface fixed to concrete slab paving with M10 bolts; Bench attached on top of in ground footings as per manufacturers specification.

4.1.4. CYCLE HOOPS

Sheffield Cycle Stand (800mm high, galvanised steel finish), supplied by Broxap or similar approved. Legs set into |C:20:P mix concrete, recessed below ground sufficient to take surfacing wearing course and base layers. Refer to drawing 20-050-207 for fixing detail and 20-050-001 for locations.

4.1.5. LIGHTING AND OTHER ELECTRICAL DEVICES

Lighting to be specified by others, however allowance should be made for any making good needs caused by other contractors on site.

5.0 SOFT LANDSCAPE – GENERAL ITEMS.

5.1. BRITISH STANDARDS.

All workmanship and materials shall conform to the following codes:-

Nursery Stock in accordance with latest Horticultural Trade Association and Landscape Institute nursery stock specification included in the National Plant Specification. Plants shall conform to: BS 3936- 1 : 1992 Nursery Stock – Specification for Trees and Shrubs: -BS 3936- 2 : 1990 Nursery Stock – Specification for roses + AMD 6628: BS 3936-3: 1990 - Nursery stock. Specification for fruit plants: BS 3936- 6 : 1998 Nursery Stock – Specification for bulbs, corms and tubers: BS 3936- 10 : 1990 Nursery Stock – Specification for ground cover shrubs. General Landscape Operations shall be to BS 4428:1989; Glossary for Landscape Works BS 3975 Pt 4: 1966: Turf – to comply with BS 3969:1998+A1:2013. Seeding – EEC regulations 1974. Imported Topsoil - BS 3882:2015. Pesticides: The Control Of Pesticides Regulations 1986 (as amended 1997); COSHH Regulations 2002 (as amended): Water Supply (water quality) Regulations 2010; Control Of Pollution Act: 1974: Tree surgery works shall comply with BS 3998:2010 (Tree work. Recommendations) unless otherwise specified, BS 8545:2014 Trees: from nursery to independence in the landscape

Tree protection measures to be in accordance with BS 5837:2012 and BS 6549:1990, BS 3998: 2010 (recommended for tree works) and the Arboricultural Association – Standard Conditions of Contract and Specifications of Tree Works 1996, the Hedgerow Act 1997; and the Wildlife and Countryside Act 1981.

5.1.1. WORKMANSHIP AND LABOUR.

All operatives carrying out soft landscape works shall have had some basic training and qualification in horticulture. All operatives shall be supervised by a qualified foreman – with a minimum of HND level or equivalent number of years' experience.

5.1.2. PLANTING SEASON AND WEATHER CONDITIONS.

All stock (other than container grown) shall be planted between November 15th and February 15th. Planting operations shall be carried out in suitable open weather and all plants re-firmed if lifted by frost during the contract. No planting shall take place in dry, hot and sunny weather, if frost and snow are present, if the ground is waterlogged or in cold east winds, regardless of the stock type specified.

5.1.3. NURSERY MARK.

Plant all stock to the correct depth, no deeper than the nursery mark on the plant stem in accordance with BS 4428: 1989.

5.1.4. PLANTING OPERATIONS.

Pit plant all container-grown stock, only lightly loosening the root ball in order to avoid damage to any roots. Firm in – but not excessively, in order to avoid damage to the root ball. For all open ground stock, notch plant transplants and whips and pit plant feathers or larger stock, unless otherwise stated and agreed with the Contract Administrator. Plant in mixes and positions in accordance with the drawings. For notch planting, cut an open 'T' shape with a mattock blade or a spade to 200mm in depth, planting the whip within the notch. Firm in the surrounding soil taking care not to damage the roots of the plant. For pit planting, excavate a pit 20% larger than the root ball of the plant, and ensure the nursery mark is level with the soil surface. Fill any gaps around the root ball with soil and peat-free compost or other ameliorants. Firm in well but not excessively. Water in all stock within 2 hours of planting and prune back leggy growths, especially winter planted native whips, and remove up to a third the length of the whip with secateurs within 2 hours of planting.

5.2. TOPSOIL

5.2.1. QUALITY OF EXISTING OR IMPORTED TOPSOIL/ROOTZONE

- Imported and existing supplied/stockpiled topsoil shall generally be to BS 3882:2015, but the pH shall be within the range 6.5 – 8.2. A soil analysis must be undertaken by an approved soil scientist/analyst to demonstrate compliance. The Landscape Sub-Contractor must allow for all fees and costs incurred in sampling and testing. Reports on the quality and suitability of any proposed topsoil must contain the scientist/analyst's 'plain English' statement as to whether or not the topsoil is compliant with the specification and suitable for the purpose intended and if not what ameliorants are required to be added.
- A sample of the topsoil and copy of the soil analysis shall be submitted to the Contract Administrator and approved. In necessary, instructions for its improvement shall have been issued before additional soil is brought on site. All subsequent importations of topsoil shall be to the same quality and any topsoil brought onto the site without the approval of the Contract Administrator will be rejected, and is to be carted off site at the Landscape Sub-Contractor's expense.

5.2.2. DEPTH OF TOPSOIL

Topsoil is to be evenly and thoroughly cultivated to depths as follows incorporating any specified ameliorates to full depths of cultivation:

- Advanced Nursery Stock Trees – Hard Pits generally 1.5 x 1.5 metres square and 1.2 metres deep,
- Multi-Stem Trees - Pits generally 1.5 x 1.5 metres square and 0.7 metres deep;
- Advanced Nursery Stock Trees - Pits generally 1.5 x 1.5 metres square and 0.8 metres deep;

- Heavy Standard Trees - Pits generally 1.2 x 1.2 metres and 0.7 metres deep;
- Standard Trees - Pits generally 1.0 x 1.0 metres square and 0.7 metres deep;
- Feathered trees - Pits generally 0.6 x 0.6 metres square and 0.6 metres deep;
- Shrubs and hedges 0.45 metres;
- Rear gardens 300mm site topsoil (if required);
- Seeded or Turfed Areas 0.15 metres deep.

The above tree pit dimensions relate to trees in adequate soft landscape providing suitable rooting volumes.

Where new topsoil is imported, the ground should be cultivated to a depth of 0.6 metres.

5.2.3. STORAGE OF TOPSOIL ON SITE.

Store imported or existing topsoil on site, in an area to be agreed with the Employer, storing in heaps no greater than 1.5 metres high. Cover with sacking, or geotextile sheeting until used, to prevent excessive weed growth and drying. Any weed growth shall be removed by hand ensuring all weed growth has been removed before utilising the top-soil for fill.

5.2.4. SPREADING TOPSOIL

Where spreading topsoil falls within the remit of the Landscape Sub-Contractor. Ensure the soil is not wet or during inclement weather, cart topsoil from on-site spoil heaps to the areas to be planted and spread topsoil to the depths required, (see clause 4.4.2 above), spread topsoil either for initial provision, where there is none, or else for amelioration of existing topsoil to reach proposed levels. When spreading the topsoil, ensure machinery is positioned to carry out the operation to work their way out of the area so as not to compact the sub soils. Where the machine has tracked over the filling area, ensure the sub soil is broken up before spreading the topsoil. Take special care to ensure that the finished soil levels are as specified along bed edges – in relation to adjacent surfaces. For planted areas (generally this means that sheet mulch is to be used), then finished soil levels shall be 70mm below adjacent paved or grass surfaces, so that sheet mulch and 50mm depth of course, graded, fines free, wood chip mulch can be spread over the beds and still leave a 15mm retaining edge to hold the mulch in place. Soil levels are required to be recessed 70mm below adjacent finished paving levels for the first 400mm of the bed edge only, but can slope gently upwards for internal areas of the bed, inside this perimeter band, if and when there is advantage to do so, (to avoid carting surplus soil off site), so long as the bed does not slope more than 1:4 overall. Beds sloping at more than 1:4 will need gravel boards (75 x 25mm) placed as a continuous line, horizontally along the contours, each line of boards set along the contours 1.5m apart down the slope. The boards

are to be set above soil level but with no gaps under, in order to retain bark mulch on the sloping bed, and shall be fixed in position with 450 x 50 x 50mm wooden stakes at 1.5m centres, hammered into the ground to 25mm below the top of the boards and twice nailed to boards with two galvanised, flat headed nails of 75mm length.

5.2.5. CHECKING SUITABILITY OF EXCAVATED BOTTOMS BY OTHERS.

Before cultivation and planting operations, the Landscape Sub-Contractor shall check all excavated bottoms of excavations not carried out by themselves to ensure that; (a) there is or will be a suitable depth of topsoil, taking into account the recessed finished levels required, at bed edges, (as stated in clause 4.2.4 above) and (b) that the excavated bottoms are well broken up and free draining (not compacted or smeared). Where there is insufficient depth of topsoil or bases are smeared and impermeable, notify the Contract Administrator or Site Manager for action by the ground workers. Do not cultivate or plant until rectified. Where bed formation falls within the Landscape Sub-Contractors remit, allow for breaking up excavated bottoms to ensure they are free draining and for topsoiling to a suitable depth (cl. 2.4.2 above). Failure to comply with the above and subsequent water-logging of beds later, shall require excavation of completed and waterlogged beds, in their entirety, rectifying the braking up of excavated bottoms, replacing topsoil and plants, (which may require new topsoil and new, healthy plants) including any sheet mulch and bark mulch specified – all at the Landscape Sub-Contractor's own expense – (at the sole discretion of the Contract Administrator). A photographic record of the subsoil condition prior to laying the topsoil shall be taken and submitted to the site team in each area.

5.2.6. CULTIVATION OF TOPSOIL GENERALLY.

Cultivation of topsoil shall be carried out in suitable weather conditions. No machine having a greater ground pressure than 0.2kg/cm2 shall be used and any consolidated wheel tracks shall be forked over to relieve compaction. Larger areas shall be ploughed and harrowed and stone raked using tractor mounted agricultural equipment. Smaller areas shall employ mechanical rippers, rotovators and stone raking or burying machines. Very small areas shall be dug over and raked by hand to a tilth free from stone. A photographic record of the topsoil condition after laying shall be taken and submitted to the site team in each area.

5.2.7. DEEP CULTIVATION AND RELIEVING OF COMPACTION AND HARD PANS.

Ensure that all areas to be cultivated are free from compaction and hard pans. Relieve compacted ground or hard pans by ripping with a tractor mounted ripper at 500mm centres to a depth of 600mm. **Do not rip within 10 metres of existing trees and 3 metres from hedges.** For smaller areas where ripping is not possible, rotovate to sufficient depth to ensure there is no compaction but taking great care to avoid any damage to existing tree or hedge roots. Ensure all such operations are carried out in suitable weather conditions – not wet or waterlogged. Where tree roots are found – cease operations. Relieve any compaction using an air spade. Where excavated

bottoms cannot be broken up sufficiently and ground water seepage or adjacent gradients and obstructions are likely to result in waterlogging, seek advice from the Contract Administrator and, if requested, Comer Homes consultant Landscape Architect. Such areas may require shattering with an air spade or 'Terravent' system, or additional drainage provision as appropriate.

5.2.8. FINAL GRADING.

Final grading is to be carried out to ensure the true specified level and grade is achieved, avoiding hollows where water may collect. The use of a heavy roller to remove lumps will not be permitted and any area that becomes unduly compacted shall be loosened by forking.

5.2.9. FERTILISER FOR SHRUB AND SEEDED AREAS.

For all areas of planting apply 100g per m2 of a suitable and approved granular, slow release fertiliser to soil in late March, ratios of Hortibase CRF 16-8-12 slow release fertilizer or similar and approved, strictly in accordance with the manufacturer's instructions and lightly worked into the surface of the soil - or as otherwise instructed by the manufacturer. Tree pits shall have 150g for standards and feathers; 250g for heavy standard tree pits and 350g for advanced nursery stock tree pits. For all areas to be planted apply 100g per m2 of Hortibase CRF 16-8-12 slow release fertiliser to soil in late March, except notch planting, strictly in accordance with the manufacturer's instructions, and work into soil. For all areas to receive grass seed (except for areas to receive wildflower / wildflower turf, tussock or meadow grass seed mixes – which shall not under any circumstances be fertilized – unless specifically agreed with the Contract Administrator), apply a pre-seed fertilizer such as that marketed by British Seed Houses, or other similar and approved, – applied at a rate of 70g per m2 and worked in to the top layer.

5.2.10. SURFACE CULTIVATION (EXISTING OR IMPORTED TOPSOIL).

Cultivate existing or imported topsoil taking care to adjust soil levels at bed edges to ensure that the finished soil levels within 400mm of the bed edges are recessed 65-80mm below the finished adjacent paving surface. For the remainder of the bed, the soil can slope upwards so long as the gradient of the bed does not exceed 1:4, to ensure the sheet and bark mulch does not slip. Ensure that the topsoil is sufficiently well cultivated and ameliorated to conform to BS 3882:2015, and that it is friable, aerated, mixed with peat free compost and for clay soils also mixed with sand and that the soil is otherwise suitable for the healthy growth of plants.

5.3. WATERING

5.3.1. WATERING VISITS.

The Landscape Subcontractor shall provide means of watering shrubs, trees and grass areas (seeding and turf) from an approved source for the duration of the contract, as agreed with the Employer. Watering shall be carried out during any continuous period of dry weather lasting more than 14 consecutive days and shall be defined as having been less than 30mm rainfall within this period, where upon watering shall be carried out at 3-5 day intervals as agreed with or instructed by the Employer or his agents, according to the temperature and conditions experienced – and sufficient to ensure the survival of shrubs, trees and turf. The Landscape Sub-Contractor shall be responsible for determining such dry periods and for notifying the Contract Administrator, and the Contract Administrator shall authorise the frequency of the required watering visits by the Landscape Sub-Contractor. Any plant failures due to drought, following failure to provide notification of dry periods (in the sole opinion of the Contract Administrator) shall be replaced at the Landscape Sub-Contractor's own expense.

5.3.2. AMOUNT OF WATER PER VISIT.

Watering shall be to field capacity or 50 litres per tree and 25 litres per meter square for shrub areas, whichever is the greater. Water shall be supplied by fine spray hose attachment, or hand container with rose, to the base of plants. Watering shall not take place during the heat of the day or in full sunlight.

5.3.3. EQUIPMENT.

The Landscape Sub-Contractor shall supply all necessary equipment including a bowser, and all such equipment shall be included in the Landscape Sub-Contractors' rates.

5.3.4. WATER RESTRICTIONS.

If the water supply is, or is likely to be, restricted by emergency legislation, inform the Contract Administrator and ascertain the availability and additional cost of second class water from a sewerage works or other approved source, having first prepared a risk assessment following liaison and advice from the Water Authority in connection with the avoidance of potential health risks from such water to persons working or living near to the area where the water is to be applied.

5.4. SUPPLY OF PLANT MATERIAL

5.4.1. QUALITY OF PLANT MATERIAL

All trees and shrubs shall to be supplied from nurseries in the United Kingdom or other member countries of the EU. The Contract Administrator shall approve the nursery selected by the Landscape Sub-Contractor for the supply of plants. All plant material shall conform to BS 3936 part 1-11. All plant material shall be transplanted nursery stock on healthy vigorous and sound roots with well-formed heads and to have been grown at or grown on at the supply nursery. Trees and shrubs shall be true to name. Plants will be of the sizes specified in the Horticultural Trades Association and Landscape Institute document – National Plant Specification. Any plants that fail to meet these criteria will be rejected and replaced by the Landscape Sub-Contractor at his own cost.

5.4.2. CONDITION OF PLANTS.

All plants shall be free from pest and disease and shall be materially undamaged. No roots should be in torn or lacerated condition, or subject to adverse conditions such as prolonged exposure to drying winds or frost or subject to waterlogging between lifting and delivery. The root-ball shall be free from pernicious annual and perennial weeds, and from tree seedlings especially those of the goat willow, which are common in some nursery stock.

5.4.3. CARE OF PLANTS

The Landscape Sub-Contractor shall be fully responsible for the protection of plant material being grown on at their nursery and shall make good defects. All plant material shall be packed at the supply nursery in a way that will ensure that they do not dry out in transit. In the case of root-balled or open ground trees and shrubs, the root-ball should be packed in damp hessian or other suitable material.

5.4.4. SUBSTITUTION

No substitutions to the plant selections shall be made without the written approval of the Contract Administrator.

5.4.5. DELIVERY

The Contract Administrator shall be notified as soon as plant material has been delivered on site. Plants should only be delivered on site when the weather and soil are in a suitable condition to be planted immediately. The Contract Administrator reserves the right to reject plant material, which, in their sole opinion, they deem to be deficient in variety, quality, health or size. Any rejected stock shall be returned to the nursery supplier and replaced with suitable stock at the Landscape Sub-Contractor's own expense.

5.5. TREE PLANTING

5.5.1. LOCATION OF TREES

Access for excavation machinery to tree pits shall be agreed, before being carried out, with the Site Manager and, as appropriate, Comer Homes Arboricultural and/or Ecological consultants, where such access traverses under tree canopies or through ecologically sensitive areas, fenced off zones, or ground left in its former wild state. Tree pits shall be located in the exact positions shown on the drawings. Any tree pits incorrectly positioned will be rejected and the Landscape Sub-Contractor shall be required to excavate fresh pits at their own expense, in order to comply with NHBC Guidelines Clause 4.2 "Trees near buildings and services".

5.5.2. PREPARATION OF PITS

Tree pits shall generally be dug as follows unless otherwise specified and/or indicated on the drawings:

- Advanced Nursery Stock Trees – Hard Pits generally 1.5 x 1.5 metres square and 1.2 metres deep,
- Advanced Nursery Stock Trees - Pits generally 1.2 x 1.2 metres square and 0.95 metres deep,
- Heavy Standard Trees - Pits generally 1.0 x 1.0 metres and 0.9 metres deep,
- Standard Trees - Pits generally 1.0 x 1.0 metres square and 0.85 metres deep,
- Feathered trees - Pits generally 0.65 x 0.65 metres square and 0.65 metres deep,
- Shrubs 0.45 metres.
- Prepare pits within two days of the actual tree planting taking place. Remove any unused excavated material from site. Any topsoil that may previously have been spread shall be carefully set aside for re-use. At the time of actual planting the pit shall be enlarged if necessary to allow 75mm clear around the edges of the spread of the root system of the plant. The base of the pit shall be broken up by forking to a minimum depth of 150mm. The sides of the pit shall be loosened to leave an open-textured face.

5.5.3. FEATHERED TREES

Plant trees in exact positions as drawn. In the event that trees cannot be planted where shown, reposition further away from building foundations than shown, but never closer. Install single 100mm diameter, 1.6m long stake (height above ground to be one third the height of the tree), complete with tie and spacing device set 575mm above ground, in accordance with tree pit detail if these accompany the drawings(s) given below. Include for flexible hose watering tube fitted around top of root ball, with end caps at both ends.

5.5.4. FEATHERED TREE IN GRASS

Include for a 500mm radius recessed 65mm below the grass base level – cut sharply and install a circular cut piece of "Ecotex" biodegradable sheet mulch from Hy-Tex (UK) Limited. Tel: 01233 720097, pegged down flat and evenly. Then evenly spread over this to a depth of 50mm a coarse, graded, largely free of fines, bark or wood chip mulch available from an approved source (e.g."Chunky-Chip Longevity" available from Suffolk Woodchips Ltd Tel. 07881 904100 or 01842 813 555, email: suffolkwoodchipsltd@outlook.com, or similar, graded, fines free (and approved by JBA) product, evenly spread around the base of the tree, over a cut out circle (or square) of sheet mulch pegged well down at 300mm centres, with metal hoops, all recessed so that the mulch level is 25mm below the grass level, to allow for mowing, (i.e. the soil level will be 75mm below the grass level). Water in trees with 50 litres of water per tree position, within 4 hours of planting.

5.5.5. STANDARD TREE PIT IN SOFT LANDSCAPE;

Sides and bottom of tree pit to be broken up and backfilled with a medium as close as possible to medium excavated from the tree pit replicating, as close as is practicable, the original soil profiles (max 300mm depth of topsoil to BS 3882:2015). Ensure finished levels of top soil are 65mm below the top of trench. Ensure base and sides of ameliorate soil with 30 litres of non-peat based compost per linear metre and 150g of Hortibase 16:10:10 -140 day slow release fertilizer incorporated into top 100mm of topsoil. Subsoil backfill to be loosened and treated with suitable soil ameliorant if heavy clay exists. Install root protection barrier type Reroot 1000 or 2000: thickness 2mm, depth 2000mm where possible (or 1000mm where not), available from Greenblue Urban, Tel: 0800 0187797 or similar and approved. Root barrier (where required) positioned where shown in tree pit detail. Remove sharp objects from the trench walls and the backfill material. If required overlap by 500mm to join Reroot 2000 and secure with root barrier jointing tape. Ensure the top of the barrier finishes at least 10mm above finished soil levels. Lay geotextile fabric - Terram 1000 over slightly compacted drainage layer, 100mm depth, of sharp sand. Stakes to be treated with Tanalith E or ACQ (copper based with no arsenic) or Holmenit CX-10 (Chrome based, with no arsenic or copper), peeled larch timber stakes, 2no, 2400 x 100mm diameter, to be securely driven into firm subgrade, with half round cross brace securely nailed to the stakes. Ensure it is sufficiently away from rootball to prevent root damage. 1 no. tie per tree, tie and spacing device nailed to cross brace with galvanised nails. Cross brace approx. 650mm long, 100mm diameter, half-round, secured to both stakes. Perforated PVC watering

pipe (60mm diameter) including end caps. To be wrapped in "Hytex 18" membrane. To be coiled horizontally, around top of rootball, with cap on end to ensure even distribution of water. Ensure inlet is slightly above finished surround level. Biodegradable mulch mat to be applied around base of the tree. 1000mm x 1000mm square/circle cut around tree stem and water pipe. To be pegged in at 300mm centres with timber pegs or similar and approved. Coarse wood chip mulch free of fines to a depth of 50mm, over mulch mat, recessed 15mm below grass level.

5.5.6. FOR HEAVY/EXTRA HEAVY STANDARD TREE PIT IN SOFT LANDSCAPE**;**

Excavate to a depth of 1500mm and sides and bottom of tree pit to be broken up and backfilled with a medium as close as possible to medium excavated from the tree pit replicating, as close as is practicable, the original soil profiles (max 300mm depth of topsoil to BS 3882:2015). incorporate fertilizer such as Hortibase cfr 16-8-12 slow release from Hortifeeds tel. (01522) 704404 into topsoil at suitable rates. Subsoil backfill to be loosened and treated with suitable soil ameliorant if heavy clay exists. Topsoil beneath grass to be 150mm and 300mm if planted. Install root protection barrier type Reroot 1000: thickness 2mm, depth 1000mm, available from Greenblue Urban, Tel: 0800 0187797 or similar and approved. Root barrier (where required) positioned where shown in tree pit detail. Remove sharp objects from the trench walls and the backfill material. If required overlap by 500mm to join Reroot 1000 and secure with root barrier jointing tape. Ensure the top of the barrier finishes at least 10mm above finished soil levels. Lay geotextile fabric - Terram 1000 over slightly compacted drainage layer, 100mm depth, of sharp sand. Stakes to be Chestnut timber stakes, 2no, 2400 x 100mm diameter, to be securely driven into firm subgrade, with half round cross brace securely nailed to the stakes. Ensure it is sufficiently away from rootball to prevent root damage. Tree tie to be 1 no. tie per tree, of 75mm width sack cloth wrapped in figure of eight formation around tree stem or stake (or brace) and with several turns between stem and stake (or brace) in order to provide a suitable or sufficient spacer to prevent chafing of the stem against the stake (or brace). In the case of tree stakes, the tie shall be positioned no lower than 25mm from the top of the stake to minimise the risk of chafing damage. Cross brace approx. 650mm long, 100mm diameter, half-round, secured to both stakes. Perforated PVC watering pipe (60mm diameter) including end caps. To be wrapped in "Hytex 18" membrane. To be coiled horizontally, around top of rootball, with cap on end to ensure even distribution of water or similar and approved. Ensure inlet is slightly above finished surround level.. Biodegradable mulch mat to be applied around base of the tree. 1000mm x 1000mm square/circle cut around tree stem and water pipe. To be pegged in at 300mm centres with timber pegs or similar and approved. Chunky Chip Longevity bark mulch free of fines to a depth of 50mm, over mulch mat, recessed 15mm below grass level.

5.5.7. FOR HEAVY/EXTRA HEAVY STANDARD TREE PIT IN HARD LANDSCAPE;

Excavate to a depth of 1100mm and ensure the sides and bottom of tree pit to be broken up to allow drainage. Lay geotextile fabric - Terram 1000 over slightly compacted drainage bed layer, 100mm depth, laid in layers of different gauge aggregates from course at the base (20mn gauge) to fine above (10mm gauge).

If required - root protection barrier type Reroot 1000: thickness 2mm, depth 1000mm, available from Greenblue Urban, Tel: 0800 0187797 or similar and approved. Root barrier (where required) positioned where shown in tree pit detail. Remove sharp objects from the trench walls and the backfill material. If required overlap by 500mm to join Reroot 1000 and secure with root barrier jointing tape. Ensure the top of the barrier finishes at least 10mm above finished soil levels.

Install 3No Underground guying Deadman anchors approved to BS:4043 to be installed according to manufacturer's instructions by a suitably qualified operative. Deadman anchors (heavy timber or metal base plate) are placed in the base of the tree pit in a triangle shape to secure the wires to. For each of the three cables, loop the D ring end of each cable through the wire loop on the opposite end to create a slip knot noose. This noose is then positioned over the end of each of the three Deadman anchors and tensioned up in the centre. Leave cable available through soil backfilling to install over the rootball. Once this has been done in the centre of each of the Deadman (three times), the nylon webbing passes through the small loop on the end of each cable and is ratcheted up tight over the top of the root ball.

Backfill areas outside of tree pit with "Amenity Tree Soil" supplied by Green-Tech Tel: 01423 332100, or similar and approved. Tree soil to be backfilled in 300mm layers, each compacted to 3.0 megapascals achieving 78-82% CBR rating and each layer tested with penetrometer or similar approved apparatus. All in accordance with suppliers instructions. Ensure base of pit is forked over to ensure adequate drainage.

Backfill tree pit with max 300mm depth of topsoil to bs 3882:2015. The rest of the tree pit to be backfilled with sandy loam, friable sub soil medium layer, to bs 8601:2013: laid in layers of 150mm. Ensure base of pit is forked over to ensure adequate drainage. "Hortibase CRF (NPK 16-8-12)" slow release fertilizer incorporated into top 100mm of topsoil.

Install Root Director to all trees planted in ground on the ground floor. For the protection of pavements and hard landscaped areas, prevents root swirl and diverts root growth downward and outward. To be RD640A by Green Blue Urban, Tel:01580 830 800, or similar and approved.

Install RRURB1A Rootrain Urban irrigation system, available from Greenblue Urban, Tel: 0800 0187797 or similar and approved, installed around the root ball. Ensure inlet is slightly above finished surround level. Biodegradable mulch mat to be applied around base of the tree. 1000mm x 1000mm square/circle cut around tree stem and water pipe. To be pegged in at 300mm centres with timber pegs or similar and approved.

5.5.8. APPROVAL OF PITS

Tree pits shall be approved by the Contract Administrator before planting works are carried out.

5.5.9. STAKE AND TIES

Stakes shall be peeled larch pole with a clear height of 600mm above ground and 1.0m below ground. Stakes shall be connected with a half round brace nailed with galvanised nails to the stakes. All stakes shall have a minimum diameter at the top end of 70mm but shall average 100mm, and shall be free from any projections, and shall have been pointed at base to allow the stake to be driven into the sub-base. Stakes to be pressure treated with pressure by "Permawood" or other similar and approved. 1 no. tie per tree, tie and spacing device nailed to cross brace with galvanised nails. In the case of tree stakes, the tie shall be positioned no lower than 25mm from the top of the stake to minimise the risk of chafing damage.

5.5.10. SUPPORT

All feathered trees larger than 1200mm high to be staked with single stake, 1800mm long x 75mm diameter, placed on windward side of tree (if not specified differently to be underground guyed).

5.5.11. TREE FERTILISER

Add 150g per tree pit of Nutricote 180 (MPK 16-10-10) slow release fertilizer.

5.5.12. BACKFILLING

Topsoil and additives should fill the pit to allow the top of the pit to run flush with surrounding ground levels after settlement unless the tree is within grass areas where the soil level shall be 50mm below the grass surface level in order to receive a 500mm radius of 50mm depth Suffolk Woodchips Ltd "Coarse, Graded Free of Fines Large Wood Chip Mulch". As backfilling proceeds, the soil must be lightly firmed layer by layer, care being taken to avoid damage to the roots.

5.5.13. SURPLUS EXCAVATED MATERIAL

All surplus excavated material, weeds, stones, or rubbish encountered shall be carted away to a suitable and approved tip and all associated licences and tipping charges shall be included within the Contractors rates.

5.5.14. MINOR DAMAGE AND LABELS

Upon completion of the planted works, the Contractor shall prune all damaged stems back to a shoot or node and shall remove all labels from the trees.

5.5.15. COARSE GRADED WOOD CHIP MULCH

Bark mulch to be graded bark mulch containing no fines. Mulch shall be Suffolk Woodchips Ltd " Chunky Chip Longevity Mulch". No substitution will be accepted unless first approved in writing by the Contract Administrator, following submission of a representative sample. Spread the mulch evenly over the bed ensuring that finished levels adjacent to pathways are at least 15mm below levels.

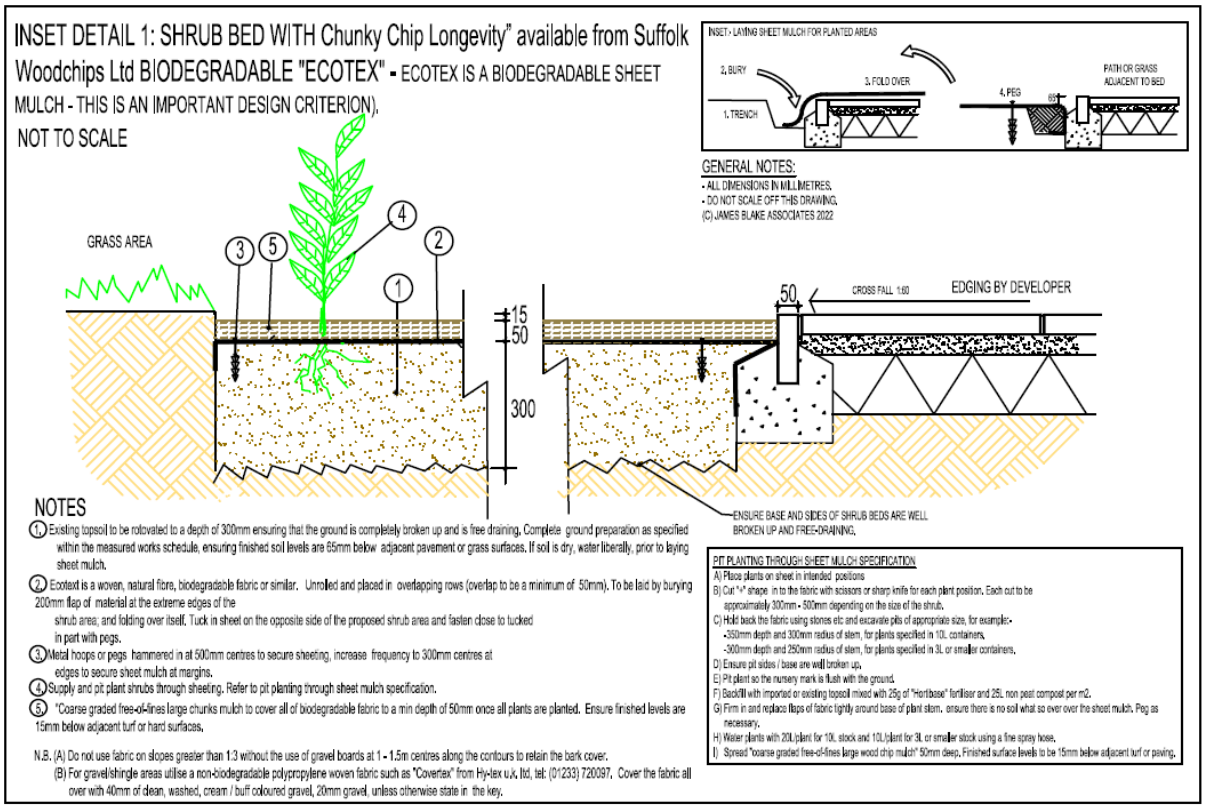
5.5.16. SAMPLE

If the Contractor wishes to suggest an alternative mulch supplier to the Contract Administrator, then a sample load of mulch should be submitted for comment and approval by the Contract Administrator whose opinion shall be final in determining if the alternative is suitable or not. Keep samples separate and intact for future comparison. Any unauthorised mulch supplied and spread on the site and subsequently rejected by the Contract Administrator shall be removed and replaced entirely at the Contractors' own expense.

5.6. ORNAMENTAL SHRUB PLANTING

5.6.1. LOCATION OF BEDS

Shrubs are to be planted at the spacing, numbers and at distances from hard standing or built form shown on the plans. Comer Homes consultant Landscape Architect may, at their discretion, vary the grouping, arrangement or density of the planting shown on the drawings to achieve the best immediate effect from the planting. Beds shall be located and set out exactly as shown on the plans. Any variations required on site shall be first communicated to the Contract Administrator, and such changes first agreed in writing, or any subsequent rejections following site inspections will have to be made good at the Landscape Sub-Contractor's own expense.



5.6.2. PRUNING

The Landscape Sub-Contractor shall allow for pruning back native plants by 30% on planting and prune new hedges to a crisp line, unless otherwise specified by Comer Homes consultant Landscape Architect. All arisings to be taken off site to the contractors own tip.

5.6.3. PLANTING

Plant shrubs and hedges exactly in accordance with the landscape drawings. Excavate planting holes 75mm wider than the root spread. All non-perishable containers shall be removed and any damaged roots carefully pruned. Each plant shall be planted at its correct depth, to the original soil or nursery mark, to BS 4428:1989. Peat free compost and sand additives shall be worked well into backfill whilst backfilling is in progress, taking care not to raise general levels of the soil so that the bed edges are less than 65-80mm below the adjacent edges.

5.6.4. BACKFILLING

Gaps around the root ball shall be filled to half its depth and firmed by hand, but avoiding damage to the roots. Further soil can then be used to fill the voids to the surface and firmed by treading, taking care not to over firm and damage roots. Sheet mulch flaps (where applicable) can then be replaced around the stem of the plant, pegging as necessary (with increased centres for pegging at the edges of the bed, where the bed is exposed to wind or vulnerable to trampling).

5.6.5. WATERING

Water in all plants within 4 hours of planting with 20 litres minimum per m2, applied with a fine spray hose.

5.6.6. SURPLUS MATERIAL

Unless otherwise specified, all surplus excavated soil material, along with weeds, stones, litter, debris encountered during planting operations shall be carted away to a suitable, licensed tip

5.6.7. PLANTING GROUND COVER MIXES

Plant ground cover shrubs where specified and in the case of a species mix, then plant each variety in groups. The numbers of each species for the groups is specified on the planting schedule on the drawing (and will be inspected by the Contract Administrator or by Comer Homes consultant Landscape Architect).

5.6.8. PLANTING SPECIMEN SHRUBS IN GRASS

Pit plant individual specimen shrubs in exact positions as drawn. In the event that specimen shrubs cannot be planted where shown, reposition further away from building foundations than shown, but never closer. For shrubs in grass, ensure soil levels within 300mm radius of stem are 75mm below grass level. Fill recess with 50mm depth of approved coarse, graded, free of fines large

wood chip mulch, spread evenly over a cut out circle of sheet mulch, pegged down at 200mm centres. Where specimens in grass areas are proposed in groups, combine the individual specimen pits, ensuring soil levels are recessed 75mm below adjacent grass level, with sheet and bark mulch as before, to merge the areas to form one planted bed. Water the shrubs within 4 hours of planting, with 20 litres of water per shrub position.

5.6.9. CLIMBER SUPPORTS – SELF CLINGING VARIETIES

Self-clinging climbing shrubs or wall shrubs with "S" drawn after the climber name on the plans shall be trained to the wall/fence with heavy duty, plastic coated garden wire (unless a system of support for climbers has been incorporated into the building). Training wires shall be attached vertically to the wall/fence by means of 2 No. 125mm long stainless steel eye screw fittings. Position one of these at 250mm from ground, and the other 250mm from top of the wall/fence, and string the wire tightly between the fixings. Train the climber to the wire with plastic coated garden wire tags in order to prevent the stem moving in the wind.

5.6.10. CLIMBERS OUTSIDE PLANTING BEDS

Climbers specified outside proposed shrub beds shall have specially prepared climber pits. Climber pits shall be 400 x 400 x 600mm deep (minimum size), suitably edged in brick, block or edging unit on a narrow concrete bed (so not to fill the pit with concrete), and be backfilled with topsoil (from site – unless otherwise agreed). Ensure the base of the pit is broken up and free draining before back filling with topsoil. Ensure no damage to foundations and services, and make good all structures and surfaces disturbed. Fertilise with 50g of Vitax Q4 slow release fertiliser. Water with 15 Litres per climber pit. Cap pit with "Terram 1000." Cover with gravel mulch (10mm gauge).

5.6.11. PLANTING BULBS IN GRASS

Plant bulbs as specified in the plant schedule between August and September. Clean the bulbs removing any loose outer coatings and old roots. Plant all daffodil (Narcissus) bulbs 12-15cm (5-6 inches) deep in late summer or early autumn into seeded areas in the locations specified at a density of 20/m2. For Crocus, plant 50mm below surface. Firm back all soil (and turf) afterwards.

5.6.12. SHEET MULCH

Lay suitable biodegradable sheet mulch in locations as identified on JBA 20/027-06 to 10, the specific garden areas and not the wider landscaped grounds.

Supply and lay suitable biodegradable sheet mulch. Sheet mulch to be Ecotex Biodegradable mulch mat (available from HY-TEX UK Limited). Ensure that the area to be planted is evenly graded. Ensure that the soil is recessed along all bed edges, so that the sheet mulch will be 70mm (plus or minus 10mm tolerance), below the adjacent surfaces for a width of 400mm from the bed edge and this recessed soil level shall be married in to the original level, (it is advisable to bury the material from the back and then to stretch the material

back over the bed). Achieve this by excavating a trench 75-100mm deeper than the finished soil level, to a width of one spit, all along the edge of the bed. Unroll the material along the outer edge of the planted area, upside-down, the material lying mostly over the adjacent surface, leaving just 150-200mm or so overhanging the bed itself. Bury this overhang in soil to a depth of 75-100mm all along the edge of the bed and then stretch the material back over the bed itself to its full width. Peg the material down at 300mm centres along both edges, and at 500mm centres elsewhere. Use timber pegs or other similar and approved. Where there is a concrete haunch on the outer edge, the material can sometimes be fixed to it using masonry nails, in addition to the burying technique set out above. Unroll further lengths, overlapping 100mm to cover the entire area to be planted. Following pegging, place the plants on the material as shown on the planting plan. Cut a cross in the material at least 350mm wide for each plant position. Peel the 4 flaps back and weigh them down with small stones or clods.

Pit plant each of the plants proposed, dispose of any surplus soil either into the pots of the shrubs just planted or by spreading under the sheet, (taking care not to make the ground uneven or impact on soil levels near to bed edges or where necessary, cart away to skip. Once the plants are planted, replace the material flaps around the stem tightly and peg to hold in place. Following completion of all planting operations, supply and spread suitable and approved graded, ‘no-fines,’ bark mulch as specified below.

FOR TREES IN GRASS; Hy-Tex Biodegradable mulch mat to be applied around base of the tree. 1000mm x 1000mm square/circle cut around tree stem and water pipe. To be pegged in at 300mm centres with timber pegs or similar and approved. Bark mulch free of fines to a depth of 50mm, over mulch mat, recessed 15mm below grass level.

SOIL LEVELS WHERE SHEET USED.

It is essential that the soil levels, following cultivation and incorporation of compost are finished 65-80mm below adjacent pavement or grass surfaces - in order to receive 50mm of approved wood chip mulch (as specified) over, or else the wood chip will spill onto paved surfaces or in the case of grass areas, cause problems with mowing. Compliance with this specification of soil levels will ensure that there is a 20mm retaining edge to all planting beds to prevent the mulch from spilling out over paved and grass surfaces.

5.6.13. MULCHES GENERALLY

All bark or wood chip mulches shall have a nominal particle size of 15-75mm with 0% dust and fines and a representative sample shall be submitted to and approved by the Contract Administrator prior to use, whose decision as to its acceptability shall be final. No costs for sweeping up, carting away or replacing mulches shall be accepted by the Employer if rejected by the Contract Administrator. All mulch products shall be pest, disease and weed free and not have been treated with Methyl Bromide or any additives. It shall

have been tested in accordance with the requirements of BS 4790:1987, for fire resistance and have a pH of between 4.5 and 5.5.

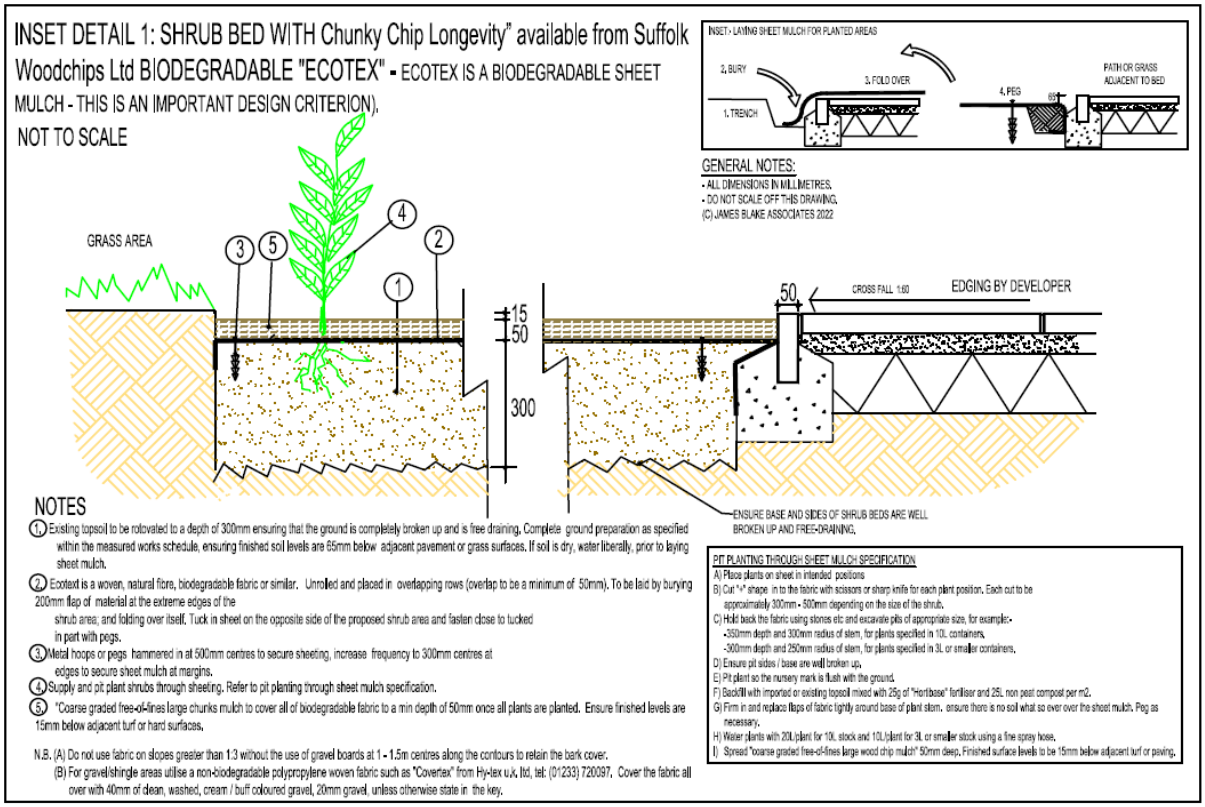
5.6.14. BARK MULCH

Suffolk Woodchips Ltd coarse, graded wood chip mulch (containing no fines). This wood chip mulch shall have a large average particle sized, no-fines mulches available: No more than 10% by weight shall pass through a 20mm mesh. The fines-free graded mulch is essential to prevent the mulch breaking down rapidly into soil. No substitution will be accepted whatsoever, unless first approved in writing by the Contract Administrator, following submission of a representative sample. Spread the mulch evenly over the bed ensuring that finished levels adjacent to pathways are at least 15mm below pavement levels, and not covering manholes or airbricks.

No sheet mulch (where applicable) should be visible after spreading mulch. Bark mulch to be installed at a depth of 50mm for planting incorporating sheet mulch and 75mm for all other planting (unless otherwise stated). Water thoroughly as specified. Mulch that is supplied and spread but not approved by the Contract Administrator shall be removed from the beds and replaced with the specified material entirely at the Landscape Sub-Contractors own cost.

5.6.15. SAMPLE

Sample loads of not less than 1 cubic metre should be submitted for comment and approval by the Contract Administrator whose opinion shall be final in determining if the mulch is suitable or not. Keep samples separate and intact for future comparison. Any unauthorised mulch supplied and spread on the site and subsequently rejected by the Landscape Architect shall be removed and replaced entirely at the Landscape Sub-Contractors' own expense.



5.6.16. PLANTING SEASON AND WEATHER CONDITIONS.

All stock (other than container grown) shall be planted between November 15th and February 15th. Planting operations shall be carried out in suitable open weather and all plants re-firmed if lifted by frost during the contract. No planting shall take place in dry, hot and sunny weather, if frost and snow are present, if the ground is waterlogged or in cold east winds, regardless of the stock type specified. Ideally planting should take place at the earliest opportunity in the planting season to allow for establishment before the summer period.

5.6.17. NURSERY MARK.

All stock shall be planted to the correct depth, no deeper than the nursery mark on the plant stem in accordance with BS 4428:1989

5.6.18. PLANTING OPERATIONS.

All container-grown stock shall be pit planted, with the rootball lightly loosened so that there is no damage to the roots. Firm in without causing damage to the root ball. For all open ground stock, notch plant transplants and whips and pit plant feathers or larger stock, unless otherwise stated and agreed with the Contract Administrator. All planting in mixes and positions shall be in accordance with the drawings. An open 'T' shape shall be cut with the blade of a spade to 200mm in depth, planting the whip within the notch. The surrounding soil shall be firmed in taking care not to damage the roots of the plant.

5.7. NATIVE HEDGEROW PLANTING

5.7.1. LOCATION

Bare root whips and transplants are to be planted at the distances and numbers shown on the plans to form boundary and delineation hedgerows.

5.7.2. PLANTING

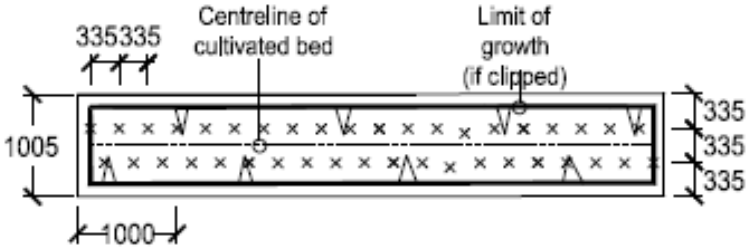
Plant bare root whips and transplants exactly in accordance with the drawings to either create new boundary, delineation hedgerows or infill existing hedgerows. Make a vertical “I”, “L”, “T” or “H” notch to a depth that will accommodate full depth of roots. Insert bare root whip or transplant at specified depth, close notch and firm soil to ensure good root hold into substrate. All bare root stock to receive biodegradable shrub shelter guards.

5.7.3. PLANTING SEASON AND WEATHER CONDITIONS.

All stock (other than container grown) shall be planted between November 15th and February 15th. Planting operations shall be carried out in suitable open weather and all plants re-firmed if lifted by frost during the contract. No planting shall take place in dry, hot and sunny weather, if frost and snow are present, if the ground is waterlogged or in cold east winds, regardless of the stock type specified.

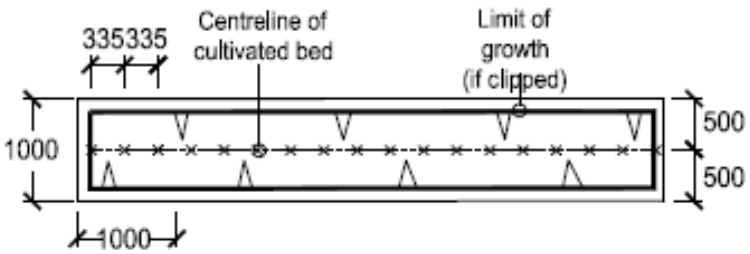
SPECIFICATION FOR HEDGE PLANTING

SPECIFICATION FOR NATIVE AND SEMI-NATIVE HEDGES e.g. Mixed native species, Carpinus betulus & Fagus sylvatica.
Hedges containing native and semi-native planting in mixes shall be planted in two straight rows set 335mm apart at a density of 6 plants per linear metre. The two rows shall be placed in the centre of the bed and shall be offset so that the plants are alternate and not opposite each other. Plants to be open ground stock 600-900mm high.

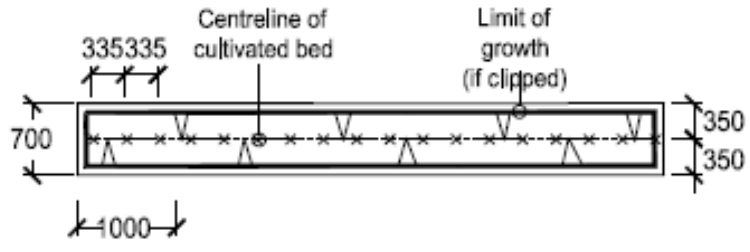


SPECIFICATION FOR ORNAMENTAL HEDGE PLANTING - LARGE GROWING SPECIES e.g. Osmanthus heterophyllus, Ligustrum ovalifolium, Viburnum tinus, Cotoneaster lacteus, Euonymus japonicus 'Aureopictus', Escallonia 'Apple Blossom' & Griselinia littoralis.

Hedges containing large ornamental species shall be planted in a single straight row at a density of 3 plants per linear metre. The row shall be placed in the centre of the bed. Hedge plants to be 3L container grown stock, 400-600mm height and spread unless otherwise stated.



SPECIFICATION FOR ORNAMENTAL HEDGE PLANTING - SMALL GROWING SPECIES e.g. Buxus sempervirens, Osmanthus delavayi, Lavendula spica 'Hidcote,' Hebe topiara & Lonicera nitida.
Hedges containing small ornamental species shall be planted in a single straight row at a density of 3 plants per linear metre. The row shall be placed in the centre of the bed. Hedge plants to be 3L container grown stock, 300-400mm height and spread unless otherwise stated.



NB. Hedges adjacent to gravel areas shall have the cultivated strip separated from gravel by a timber edge 75 x 25mm of ACQ treated timber stained with 3No. coats of Sadolin 'Classic' colour 'Walnut' (dark brown wood stain) according to specification.

5.8. NATIVE WHIP AND SHRUB PLANTING IN MIXES OR MATRICES (TO BE PIT OR NOTCH PLANTED)

Notch plant native open ground whips and pit plant container grown shrubs where specified, and in the case of a species mix, then plant each variety in groups. The numbers of each species for the groups is specified on the planting schedule on the drawing (and will be inspected by the Landscape Architect). Fix mulch mat per stem “Ecortex” from Hy-Tex (UK) Limited. Tel: 01233 720097, pegged down flat and evenly, after planting, & evenly spread 50mm depth of coarse, graded, free of fines large wood chip mulch available from an approved source (e.g.“Chunky Chip Longevity” available from Suffolk Woodchips Ltd Tel. 07881 904100 or 01842 813 555, email: suffolkwoodchipsltd@outlook.com, or similar graded, fines-free product, spreading it around the radius of each whip or shrub stem to a diameter of 500mm. All plants shall have a well-developed fibrous root system with a good root to shoot balance, and the roots of open ground stock shall never be allowed to dry out.

Where no rabbit fencing has been specified in this document or on the plan, include for anti-rabbit and protective paper box shelter 1 No 0.75m high 68mm dia “Rainbow Biodegradable Spiral Tree Guard” per whip plus support cane (Contact Rainbow Professional 131 Cumberland Street, Hull, HU2 0PP. Tel: (01482) 616861 or email on info@rainbow.eu.com): or similar and approved. Allow for pruning back leggy growth after planting.

Allow for initial spraying of ruderal weed growth before planting and for any growth during the month after planting using a suitable glyphosate free herbicide, or sustainable alternative such as hot foam treatment, as per the requirements within the ‘preamable’ of this document. Allow for pruning back leggy growth after planting. Water in all whips, shrubs and trees, within 4 hours of planting, with 20L water per m2, applied with a fine spray hose. All to be in accordance with Drawing No. JBA 20/027-06 to 10.

5.9. REPLACEMENT OF TREES AND SHRUBS.

Any trees which, within 12 months of planting, and any shrubs or herbaceous plants within 6 months of planting, fail to show growth or develop full foliage during the growing season after planting, will be rejected and shall be replaced by the Landscape Sub-Contractor at their own expense, including any works necessary to enable planting to be properly carried out, i.e. the removal and disposal of dead plant material, unless others are responsible for maintenance and this is clearly inadequate or deficient.

The opinion of the Contract Administrator shall be final in judging damaged and unhealthy plants to be replaced at the Landscape Sub-Contractors’ own expense.

Any plants which are destroyed by vandalism, theft or similar cause through no fault of the Landscape Sub-Contractor, shall be replaced by the Landscape Sub-Contractor, having first furnished the Contract Administrator with a written

quotation for the supply and planting of the replacement plants and an instruction for the same.

All plants damaged by people associated with the school or personnel engaged in landscape management, or otherwise vandalised or stolen, shall be recorded and replaced only with the written agreement of the Contract Administrator, having first been furnished with a written quotation for the supply and planting of the replacement plants. Shrubs and trees so replaced shall be the same as those specified, previously supplied and approved.

5.10. AQUATIC PLANTING

5.10.1. LOCATION

Plugs and containerized, bagged and weighted bunch aquatic plants are to be planted at the distances and numbers shown on the plans to form emergent and marginal, submerged and deeper marginal planting.

5.10.2. PLANTING AQUATIC MARGINAL PLUG PLANTS

Keep plants watered and in shade until planted. Do not allow to dry out. Remove coarse weeds etc. from planting sites, then plant into a hole to suit plug size and shape. Create a cleft at the bottom of the hole to improve rooting. Gently firm plant into the hole to ensure good root hold into substrate.

5.10.3. CONTAINERIZED, BAGGED AND WEIGHTED BUNCH AQUATIC PLANTS

Remove coarse weeds etc. from planting sites, then plant into a hole to suit plug size and shape. Lower bags / bunches gently into place, keeping plants upright.

5.10.4. MARGINAL PLANTING TO POND

Keep plants watered and in shade until planted. Do not allow to dry out. Remove coarse weeds etc. from planting sites, then notch plant into a hole to suit root size and shape. Create a cleft at the bottom of the hole to improve rooting. Gently firm plant into the hole to ensure good root hold into substrate.

5.10.5. MARGINAL PLANTS

Iindividual bareroot plants (mature rhizomes or root stock clump depending on species) as specified in the plant schedule.

5.10.6. PLANTING MARGINAL PLANTS

Plant individual bareroot plants in spring, from Mid to late April with each variety planted in groups of no less than 10 and no more than 20. All stock must have at least one viable growing tip visible. All species shall be notch planted using a trowel or spade at the density specified in the schedule. During delivery and planting, care should be taken to ensure that the roots of all plants are kept moist and that they are planted as soon as possible e.g. place the plants in buckets of water and pull them from the bunch as soon as they are required for planting. Plants located above the water line should be

watered with 20L of water per m2 applied immediately after planting with a fine spray hose.

5.11. TURF AND TURFING

5.11.1. STANDARDS.

The British standard recommendations for turf are in BS3969: 1998 + Al: 2003 and the recommendations for turfing are contained in BS 4428: 1989.

5.11.2. SAMPLES.

The Contractor shall supply a sample of the turf that they propose to use for the approval of the Contract Administrator, and ensure that all turves are similar to the approved samples. Amenity turf mix shall be "Medallion" by Rolawn Ltd. Where specified wildflower turf shall be Species Rich Lawn Turf - WFT-Species-Rich-26, by Wildflower Turf Ltd (Tel. 01256 771222).

5.11.3. DELIVERY AND STACKING.

For large areas, it is advisable that supplies of turves shall be delivered at the appropriate intervals throughout the turfing programme to avoid stacking turves for long periods. Turves shall be stacked on cleared ground to a maximum height of 1000mm, unless arranged on pallets for mechanical handling. After four days, stacked turves shall be inspected at frequent intervals; any which show signs of deterioration should be used without delay or laid out. Turf shall be delivered to site within 36 hours of lifting. If stacked, turf shall be placed grass to grass. If kept for any period, the turves shall be laid out and maintained as for turfed areas.

5.11.4. WEATHER CONDITIONS.

Turves shall not be lifted in frosty weather or when water logged. They shall be packed to avoid drying out in transit and shall be rolled or laid flat but not folded.

5.11.5. SEASON.

Turf shall be laid when the weather and soil conditions are suitable and, where possible, preference shall be given to autumn and early winter operations. No turf shall be laid in exceptionally dry, frosty, waterlogged or other unsuitable weather conditions.

5.11.6. CONDITION.

The grass shall be of a close texture, of even density and green in colour and excluding any perennial weeds with the exception of clover. The turf shall be sufficiently fibrous for the turves to hold together when handled but excess fibre or mat is undesirable. The grass shall have been closely mown and shall not exceed 25 mm in height. It shall not be visibly affected by pest or diseases.

5.11.7. DIMENSIONS.

Turves shall be rectangular shape and of uniform thickness. Unless otherwise agreed, they shall have a minimum thickness of soil of 25mm and a width of 300mm.

5.11.8. CULTIVATION OF SOIL.

All areas to be turfed shall be cultivated in accordance with the specification for cultivated topsoil. No turf shall be laid until the topsoiling in whole or in part has been satisfactorily competed by being brought to an even tilth and firmness.

5.11.9. TURFED AREAS.

Turves from the stack shall be wheeled to position on planks laid closely side by side. Adequate timber planks shall be used to support workmen and barrows and provide access. The turf shall be laid on prepared soil bed, closely butted and firmed. In large areas, turf shall be positioned in consecutive rows with broken joints as with stretcher bond brickwork. The turf shall be laid off planks, working over turves previously laid. Where necessary, the turves shall be lightly and evenly firmed with wooded beaters, the bottom of the beaters being frequently scraped clean of accumulated soil or mud. For amenity turf a dressing of finely sifted topsoil (complying with BS 3882:2015) shall be applied and well brushed into the joints (No topsoil shall be used where wildflower turf is specified, use only low nutrient sub soil). Any inequalities in finished levels owing to variation in turf thickness or uneven of soil shall conform to the levels indicated, allowing for final settlement. Turf edges and margins shall be laid with whole turves (for illustration see original British Standard publication). Any turf brought onto the site or laid prior to the approval of the Contract Administrator, shall be deemed to have been brought on or laid at the Landscape Sub-Contractor's risk and they shall be instructed to lift and/or cart away such turf from the site and replace and/or relay at their own expense, unless instructions in writing to the contrary be given by the Contract Administrator. here required, turf laid on gradient slopes to be pegged in place with biodegradable pegs and inserted to ensure the peg does not show proud of the surface to cause mowing/strimming contact.

5.11.10. TURFING AROUND TREES.

Turves adjacent to trees shall be trimmed exactly to stem and stake of tree to cover soil completely, unless mulch is specified around tree bases, when a 500mm radius to a depth of 50mm around the tree stem should be left for mulching as specified. Top mulch levels should be 25mm below the base of the grass sward for ease of mowing.

5.11.11. TOP DRESSING.

On completion of turfing, the whole of the turfed areas shall be top dressed to a depth of 10mm with fine sifted soil, and well brushed in.

5.11.12. WATERING

The Landscape Sub-Contractor shall provide means of watering turfed areas from an approved source for the duration of the contract, as agreed with the Contract Administrator. The Landscape Sub-Contractor shall be responsible for determining dry periods and extent of watering necessary and any plant failures due to drought, following failure to provide notification of dry periods (in the sole opinion of the Contract Administrator) shall be replaced at the Landscape Sub-Contractor's own expense.

5.11.13. ESTABLISHMENT OF AMENITY GRASS AREAS

Once the grass has reached 50-75mm high, mow, cutting only the growing tips and no shorter than 37mm. This will cause thickening, using an approved rotary mower. Two weeks later cut again at this height. Remove all cuttings from site immediately after mowing. Two weeks after the second cut, mow again to a height of 12mm and cut no shorter than this for 3 months. This cut will remove all broad leafed weeds and will thicken the grass.

5.11.14. MOWING, AMENITY GRASS AREAS – POST ESTABLISHMENT.

After 3 months of establishment mowing, cut every 10 - 14 days. Remove all cuttings from site immediately after mowing.

5.12. GRASS SEEDING AND SEED MIXES.

5.12.1. SEED MIXES

Amenity grass seed mix shall be “EG22” Mix by Emorsgate Seeds – (unless otherwise stated on the Plan) . All to B.S. 4428 :1989. Unless another wildflower seed mix is specified on the Plan, the wildflower seed and meadow mix to be used shall be Emorsgate Seeds EM2 Standard General-Purpose Meadow Mixture of wildflowers (20%) and meadow grasses (80%), obtainable from Emorsgate Seeds (Tel.01533 829028). Wildflower Mix:- Yarrow, Common Knapweed, Wild Carrot, Lady’s Bedstraw, Oxeye Daisy, Yellow Rattle, Birdsfoot Trefoil, Ribwort Plantain, Cowslip, Meadow Buttercup, Wild Red Clover, Common Sorrel, Selfheal, Field Scabious. Other mixes include EM8.

5.12.2. SEED STORAGE

Seed shall be protected from damp and vermin until required.

5.12.3. APPROVAL.

No seed is to be sown until the cultivation and preparatory works have been approved by the Contract Administrator.

5.12.4. CULTIVATION AMENITY GRASS SEED

Deep rip at 500mm centres to a depth of 600mm. Rotovate or plough (as appropriate to size of area) existing topsoil for areas to be seeded, breaking the soil to a depth of 150mm (taking care not to deep rip within 10m of existing tree stems or within 3m of existing hedges, or anywhere that roots are encountered greater than 10mm diameter). Fully cultivate existing and imported topsoil to a depth of 150mm and rake surface to form a fine tilth. Remove all stones, twigs, logs, and other debris. Stone rake repeatedly until all stones greater than 20mm in any one direction are removed. Grade areas to be seeded until the surface is even and of the required height, flush with any paved areas (max tolerance 0 to -10mm), to receive run off, but not so low as to cause mowing problems. Ensure soil level is proud of beds by 75mm.

5.12.5. CULTIVATION WILDFLOWER/ GRASS SEED MIX AREAS

Deep rip at 500mm centres to a depth of 600mm. Rotovate or plough (as appropriate to size of area) existing topsoil for areas to be seeded, breaking the soil to a depth of 150mm (taking care not to deep rip within 10m of existing tree stems or within 3m of existing hedges, or anywhere that roots are encountered greater than 10mm diameter). Fully cultivate existing and imported topsoil to a depth of 150mm and rake surface to form a fine tilth. Grade areas to be seeded until the surface is even and of the required height, flush with any paved areas (max tolerance 0 to -10mm), to receive run off, but not so low as to cause mowing problems. Ensure soil level is proud of beds by 75mm.. Leave the tilth for 6 weeks for the natural seed in the soil to germinate and grow. After 6 weeks (minimum time), but not later than 12 weeks, spray all weed with a suitable translocated systemic and approved herbicide (in

accordance with clause 3.1 Pesticides). Apply herbicide to the manufacturer's instructions and to 1997 Control of Pesticides Regulations and 2008 COSHH regulations on all beds. All spraying shall be carried out by skilled and qualified operatives, using protective clothing, in suitable weather (no wind) and any damage caused by spray drift, from incorrect usage or spillage, shall be rectified at the Landscape Sub-Contractor's own cost. Repeat as necessary to ensure complete kill and rake off all dead material from site, leaving a sterile soil medium for the wild flower seed to germinate in, without competition with ruderal weed seed indigenous and dormant within the soil. With 14 days for the herbicide to work properly, killing the roots, before lightly raking the surface again and seeding. This should by then ensure that the soil receiving the wildflower seed is an inert, weed free medium.

5.12.6. PRE-SEED FERTILISER Amenity Grass Seed Areas Only.

Spread and rake in Germinal "G1 Pre-seeding Quick Start 6-9-6" granular fertilizer, obtainable from Germinal GB Ltd on (01522) 868714, at a rate of 70g/m2, 9-10 days prior to seeding.

5.12.7. SOWING Amenity Grass Seed

Sow at rate of 30 g/m2, evenly over specified areas.

5.12.8. SOWING Wildflower Meadow Seed Mix

Sow at a rate of 4g/m2, evenly over specified areas.

5.12.9. RAKE IN.

Carefully rake in thoroughly to ensure that the seed is a few millimetres below surface levels.

5.12.10. ROLL.

Roll using a very light roller, (or cylinder mower). Ensure surface is even and level.

5.12.11. ESTABLISHMENT OF WILDFLOWER SEEDED AREAS.

Strim once in late October to a height of 125mm and once in mid-March to a height of 150mm. Strim again at the end of August or early September to a height of 75mm. Include for all subsequent strimming until seed mix has fully established, and for hand weeding out persistent residual weeds. Include for the immediate removal from site of all cut material **except** for the summer cut, when the cut material should be removed 7 days after strimming to allow the seed to set.

5.12.12. WATERING.

For smaller sites and lawns (less than 1500m2), water to field capacity with a fine spray hose fitting, daily in dry periods, to ensure soil is permanently moist. Continue watering for 2 – 3 weeks until grass is established, and then as necessary. For large grass areas, greater than 1500m2, take care to carry out

seeding operations in suitable damp weather conditions. Apply water in sustained dry periods during the growing season (dry periods shall be defined as being in excess of two weeks without rainfall), irrigating with bowser if necessary, to prevent failure of newly established seed.

5.12.13. ESTABLISHMENT OF AMENITY GRASS AREAS

Once the grass has reached 50-75mm high, mow, cutting only the growing tips and no shorter than 37mm. This will cause thickening, using an approved rotary mower. Two weeks later cut again at this height. Remove all cuttings from site immediately after mowing. Two weeks after the second cut, mow again to a height of 12mm and cut no shorter than this for 3 months. This cut will remove all broad leafed weeds and will thicken the grass.

5.12.14. MOWING, AMENITY GRASS AREAS – POST ESTABLISHMENT.

After 3 months of establishment mowing, cut every 10 - 14 days. Remove all cuttings from site immediately after mowing.

5.12.15. STRIMMING WILDFLOWER OR MEADOW GRASS AREAS.

After establishment, cut by use of a mechanical strimmer, 2 times a year; in mid-October and Mid-August, raking off arisings after cutting to release seeds. In very mild winters, strim again in Late April.