

**LIDL STORE, GLAN LLYN
NEWPORT. NP19 4TZ**

**PLANTING METHODOLOGY AND AFTERCARE
LANDSCAPE MANAGEMENT PLAN**



Rev 30 August 2024

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1.0 INTRODUCTION

The Site is for the proposed Lidl store, carpark, and associated retail units and nursery. The site is located off Queensway and Kings Wall Drive with a postal code NP19 4TZ and grid reference ST 355865. The Site is located within the proposed local centre for the Glan Llyn residential development in the old steelworks site.

1.1 SCOPE OF LANDSCAPE WORKS

The proposals are

- Felling of trees, removal of hedgerow and undertaking treeworks and hedge trimming back as necessary.
- Protection of retained trees.
- Clearance of the site in accordance with ecological recommendations
- Proposed planting beds.
- Proposed native blocks
- Proposed hedgerows
- Proposed trellis/fence with semi-mature climbers
- Proposed trees
- Amenity and wildflower grass areas.
- Provision of ecological log piles, hibernaculum, bird and bat boxes.
- Structural tree pits in hard landscaping carpark area
- Management for 5 years
 - Maintenance of landscaping for one year in landscape contract
 - four years by Client agent five years total.

1.2 DOCUMENTS

The design information provided by the Landscape Architect has overlaps with architectural work, civil and structural engineering work and mechanical and electrical engineering. The subcontractor should be aware that information required to undertake the landscape works will require reference to the documents prepared by other consultants.

The Planting Methodology and Aftercare was produced using information from the following resources.
Refer to the following documents as reference for the statement

- CA 2024-LIDL-GL-01 Rev A Glan Llyn Landscape Existing
- CA 2024-LIDL-GL-02 Rev A Glan Llyn Landscape Existing Features and Overlay
- CA 2024-LIDL-GL-03 Rev E Glan Llyn Landscape Proposals Overall
- CA 2024-LIDL-GL-04 Rev B Glan Llyn Landscape Trees, Hedges And Native Blocks
- CA 2024-LIDL-GL-05 Rev A Glan Llyn Landscape Planting Beds
- CA 2024-LIDL-GL-06 Rev A Glan Llyn Landscape Sections
- CA 2024-LIDL Glan Llyn Planting Schedule 29 August 2024
- CA 2024-LIDL Glan Llyn Planting methodology and Aftercare 30 August 2024
- Arboricultural Report Glan Llyn (ArbTS 2024)
- Preliminary Ecological Appraisal (Biodiverse Consulting, 2024)
- Ecological Management Plan (Biodiverse Consulting, August 2024)
- 3211 P401D Proposed Setting Out Masterplan

2.0 GENERAL CONDITIONS

EXISTING STRUCTURES ON OR ADJACENT TO SITE:

- Residential properties and Llanwern Bull public house.
- Juilian's Reen and associated scrub bank and open space.
- Queensway, Kings Wall Drive and estate road and associated footpaths and cycleways.
- Services and easements across the Site frontage with Queensway.
- Service boxes, lampposts, and underground services in adjacent roads and footpaths.
- Undeveloped area of the Local Centre
- House builders site compound and site storage areas.

- 2.1 SERVICE DRAWINGS: Any service information on landscape drawings is notional only. The Contractor MUST obtain confirmation of all services from the Principal Contractor and relevant authorities. There are extensive services. Services may require the adjustment of tree positions in certain areas and care with excavations and a requirement for root barriers where necessary.

NOTIFY: All service authorities including the Employer/Principal Contractor of any proposed works which could affect services not less than one week before commencing site operations and observe service authorities' recommendations for work adjacent to existing services.

ACCESS TO THE SITE: - Permission must be gained from the Site Agent for access to visit the whole site. The Contractor's vehicles should not cause obstruction to the Highway and all necessary regulations relating to Highway working must be followed.

Other users who will require access through the landscape contract area are:-

- Principal contractor and other sub contractors
- Access will be required by sub contractors
- Statutory Authorities

WORKING AREA, WORKING HOURS, PARKING, ADVERTISING , HEALTH AND SAFETY Refer to the Principal Contractor's site requirements and attend site inductions and carry out all health and safety instructions required by the Principal Contractor. Provide all Health and Safety information and Method Statements required by Principal Contractor.

2.2 RISKS TO HEALTH AND SAFETY

The nature and condition of the site cannot be fully and certainly ascertained before it is all opened up. However the following risks are or may be present:

- Work close to service covers, street lights, service boxes and markers
- Hazardous materials gas and electricity.
- Work close to live services and working with live services.
- Service easements on Site and close to Site.
- Site must be left safe at the completion of each day's work eg open trenches made safe,
- During the day all working areas are to be kept safe and all notices and safety procedures followed including temporary fencing where necessary
- Works on access roads eg drop kerbs, footpaths which will require traffic and pedestrian management.
- Maintenance during the maintenance period will need to take into account the security required.
- Use of solvents, inflammable substances, and chemicals
- Use of machinery with moving parts, cranes, drilling rigs, electrical equipment and general use of machines.
- Likelihood of chemical drift
- Making noise or dust during Works
- Excavations danger of underground services
- Hazards due to cold/wet windy weather - Manual handling and lifting operations
- Other contractors working on site.

2.3 PROPRIETARY NAMES: The phrase 'or equivalent approved' is to be deemed included whenever products are specified by proprietary name. Where the specification permits the substitution of a product of a different manufacture or type to that specified such a substitution requires approval from the CA and where necessary documentary verification that the alternative product is equivalent in respect of material, safety, reliability, function and where necessary of appearance to the specified product.

BRITISH STANDARDS: All materials, workmanship and plant material must comply with the relevant British Standard unless otherwise indicated.

SIZES: Unless otherwise stated the size indicated is size required

2.4 The Contractor shall notify the CA of the date of commencement and completion of the operations outlined below and provide the CA with all necessary documentation required within 7 days to record and verify the Works as follows:

- a daily distribution return showing the number and description of men employed on the works including those employed by Contractors
- a daily distribution return showing the number, type and capacity of all plant excluding hand tools currently employed on works.
- record of actions taken to protect biodiversity and monitor their effectiveness.
- record of weather conditions and other factors having material effect on progress of Works.
- record sheets of pesticide applications as required under Control of Pesticides Regulations 1986
- notification of dates of commencement and completion of operations, including all records of rates of application or use of materials, etc of application of fertilisers, pruning, mowing, litter picking and other maintenance visits etc.

Provide all necessary technical submissions, method statements and risk assessments at least one week in advance of relevant operation.

2.5 SUPERVISION/INSPECTION/DEFECTIVE WORK

CA CONTRACT ADMINISTRATOR

To be confirmed by Lidl.

SUPERVISION: In addition to the constant management and supervision of the Works provided by the Principal Contractor's person in charge, all significant types of work must be under the close control of competent trade supervisors to ensure maintenance of satisfactory quality and progress.

2.6 SAFETY/PROTECTION

Commonplace hazards which should be controlled by good management and site practice are not listed.

GENERAL CONDITIONS

- Site rules from Principal Contractor's Health and Safety Plan – use of PPE etc
- Welsh Government Covid 19 Rules
- Continuing liaison :

OPERATIONS AND MATERIALS

- Hazard – Working on Highways
- Hazard - Use of Chemicals, paints, solvents, timber stain etc
- Hazard – services
- Hazard - mechanical and manual handling
- Hazard – Tree felling and treeworks- working at height
- Hazard – protection of public and site users

MAINTENANCE

- Hazard – Working on Highways
- Hazard - Use of Chemicals
- Hazard - mechanical and manual handling
- Hazard – Protection of public .

HSE APPROVED CODES OF PRACTICE: Comply with the following:

- Management of Health and Safety at Work
- Managing Construction for Health and Safety

2.7 PROTECT AGAINST THE FOLLOWING

2.8 POLLUTION:

The contractor / landscape operatives must be conversant with the requirements of the Environmental Protection Act 1990, Pollution, Prevention and Control Regulations 2000, Hazardous Waste Regulations 2005 and the Control of Pollution (Amendment) Act 1989 for the Carriage of Controlled or Special Wastes. landscape contractors must be registered with a relevant Regulation Authority (Environment Agency) and be in possession of a valid Certificate of Registration or Certificate of Registration as a Broker of Controlled Waste under the Act. NOTE the Site is close to Julian's Reen with direct connection to SSSI Caldicot levels so care to avoid pollution important.

2.9 USE OF CHEMICALS

The contractor/ landscape operatives must comply with 'The Control of Pesticides Regulations 1986', 'The Control of Substances Hazardous to Health Regulations 1988' and any other current legislation and subsequent revisions.

All chemicals must be products on the current list of Agricultural Chemicals Approval Scheme and used strictly in accordance with the conditions of approval. The landscape contractor must comply with all relevant Codes of Practice issued by MAFF.

All pesticides/herbicides transported or stored in the landscape contractor's vehicles or on site (regardless of quantity) shall be locked in a separate storage compartment or within lockable containers which is secured to the floor of the vehicle. All storage lockers must be sealed and clearly marked as containing pesticides and bear a standard black and yellow hazard sign.

Apply pesticides/herbicides strictly in accordance with the manufacturer's instructions in calm, dry weather conditions. Chemicals should not be applied in wet, frosty or windy conditions.

The contractor/ landscape operatives must hold a BASIS Certificate of Competence, or work DIRECTLY under the supervision of a certified holder.

Notify the site operator at least 24 hours in advance of the location, type of pesticide/herbicide, active ingredient and timing of application prior to commencing work. The contractor/ landscape operatives shall erect warning signs at all entrances to the areas to be treated. When restricted to planting beds, warning signs shall be placed within close proximity in clearly visible locations. Details of application and contact person to be shown.

In accordance with COSHH Regulations the contractor shall protect employees and other persons, including the general public and adjacent land owners who may be exposed to substances hazardous to health.

Dispose of waste chemicals and containers in accordance with the 'Control of Pesticides Regulations 1986', 'Control of Pollution Act 1974' and the 'Water Act 2014' and any subsequent revisions.

The contractor / landscape operatives shall be responsible for making good and or compensation for any damage how so ever caused resulting from negligence in application, handling and/or storage of pesticides and herbicides. He shall also be responsible for keeping up to date with all legislation and regulations governing there use and inform the site operator of any changes that may affect the contract in any way.

The contractor / landscape operatives shall ensure that all property and utilities are protected against accidental or negligent damage that may occur. Any damage incurred by the contractor in carrying out their duties is to be made safe immediately and repaired to the satisfaction of the client or Utilities Company at the earliest convenient time, or as agreed, at the cost of the contractor.

It shall be the contractor / landscape operatives responsibility and liability for any damage to person or property, however caused. All operatives shall be trained according to the task to be undertaken.

2.10 EXISTING MAINS/SERVICES: GENERAL: The Contractor shall:

- Ascertain the exact location of all existing services and the like in, under or over the site or adjacent thereto. The Contractor will be held responsible for any damage or disruption to such services crossing the site or those used during the performance of the Contract. Any such damage as may occur must be made good to the satisfaction of the CA, Employer, Service Authorities and adjoining owners or occupiers, at the Principal Contractor's own expense.
- Check the positions of all services before starting work.
- Adequately protect and prevent damage to all existing services. Do not interfere with their operation without the consent of the Service Authorities or private owners.
- If any damage to services result from the execution of the Works, notify the CA and the appropriate Service Authority without delay. Make arrangements for the work to be made good without delay to the satisfaction of the Service Authority or private owner as appropriate.
- Replace any marker tapes or protective covers disturbed during the site operations to the Service Authorities' Recommendations.
- In the event of a service marker being disturbed for any reason it shall not be replaced other than in the exact position and to its former depth unless the repositioning is carried out at the direction and under the supervision of the Service Authority.
- Check all emergency and contact details for the varied service contacts and emergency numbers are up to date.

2.11 NOISE: Ensure that all measures to control noise produced by the Principal Contractor's operations required under or by virtue of the provisions of any enactment or regulations, or the working rules of any industry are strictly complied with.

- Fit all compressors, percussion tools and vehicles with effective silencers of a type recommended by the manufacturer's of the compressor, tools or vehicles.
- Do not use or permit the use of radios or other audio equipment which may cause nuisance

2.12 NUISANCE: Take all necessary precautions to prevent nuisance from dust, rubbish and other causes. Remove daily, and if it should occur on the highway carriageway immediately to avoid any hazard to road users from site rubbish and debris generated from the Works for disposal. Comply with all instructions from the CA in this respect.

2.12 FIRE: Take all precautions necessary to prevent personal injury, death and damage to the Works or other property by fire. Comply with Joint Code of Practice 'Fire Prevention on Construction Sites' published by Building Employer's Confederation and the Loss Prevention Council and National Contractors Group. Advise the CA immediately if drought, arisings or other circumstances evident give rise to a fire risk.

2.13 BURNING: Burning is not permitted on site

2.14 WATER: Prevent damage from storm and surface water. Keep site and excavations free of water

2.15 WASTE/ARISINGS:

- Remove debris, rubbish, surplus material and spoil regularly, daily where arisings are from a specific process or work item and keep the site and Works clean and tidy.
- Remove all rubbish, dirt and residues from excavations before infilling.
- Ensure that non-hazardous material is disposed off at a tip approved by a Waste Regulation Agency.
- Remove all surplus hazardous materials and their containers for disposal off site in a safe and competent manner as approved by a Waste Regulation Agency and in accordance with relevant regulations.
- Retain waste transfer documentation on site.

2.16 EXISTING FEATURES: Prevent damage to existing structures, fences, walls, roads and paved areas and other site features which are to remain in position during the execution of the Works. If damage occurs make good at the Contractor's own expense and to the satisfaction of the CA.

2.17 TIMING OF WORKS AND ECOLOGICAL CONSIDERATIONS INVASIVE NON-NATIVE SPECIES

Invasive non-native species (INNS) currently none noted. Check to be made during Site clearance.

GENERAL ACTIONS AND TIMINGS

The following measures should be incorporated into the design of the development, including the construction phase, to avoid and reduce impacts on wildlife:

- Avoid site clearance works during the nesting bird season (March to August inclusive) unless the site is checked by a Suitably Qualified Ecologist (SQE) and active nests are confirmed to be absent no later than 48 hours before works commence.
- All works will be undertaken in accordance with a CEMP (Construction Ecological Management Plan). Ecological receptors likely to be covered in this plan will include, but not be limited to hedgehog, birds, badger, reptiles, and amphibians.
- All construction activities will be programmed to daytime hours to reduce disturbance to sensitive nocturnal species, such as bats and roosting bird species.
- Gaps of at least 13cm x 13cm will be created within boundaries to facilitate movement of hedgehogs and other small animals through the Site.
- 2 Log piles and a hibernaculum to the nature conservation area at rear of store.
- Bird nest boxes and bat boxes fixed to rear of store and to nursery building.

3.0 INITIAL WORKS

3.1 CLEARANCE AND INITIAL ENABLING WORKS

- Site Clearance by others
- Felling of selected trees and treeworks as necessary.
- Removal of existing planting beds
- Removal of existing hedges and trimming back retained hedge section.
- Topsoil and subsoil is to be imported for new planting beds to make up any shortages or unsuitability on-site materials. Limited existing topsoil and subsoil – mounded existing material to be used by house builder contractor.

3.2 TREE REMOVALS

All tree felling and work to be to BS3998-2010 Refer to Arboricultural Report

All arisings are to be removed from site using some material for log piles and the hibernaculum.

Fell trees, grub up roots and remove all arisings from site

- 1No Hornbeam removed due to Category U cannot be realistically retained due to poor quality.
- 2No Turkey Oak and 5No Hornbeam to be removed.

Protection of 1No Hornbeam and 1No Sweet Gum, Scrub boundary and retained hedge section protection as detailed in the Arboricultural Report.

3.3 JAPANESE KNOTWEED

None recorded.

3.4 IMPORTED TOPSOIL AND SUBSOIL

3.5 IMPORTED TOPSOIL

- Quantity: All topsoil that is to be imported is to conform to this specification
- Standard: To BS3882 2015. Plus the following:
- Source: Submit proposals.
- Classification: Multipurpose.
- Texture to BS3882: Medium loam.
- Reaction, to BS1377-3: pH 6 - 7.5.
- Crumb structure: Made up of discernible crumbs.
- Stones:
- Size in any dimension (maximum): 20mm.
- Stone content by dry weight (maximum): 15%.

In addition to conforming to the above BS standard the soil should also conform to the following.

Visual Examination:-

Provide the CA a 1kg sealed sample bag of representative soil, for approval of the physical structure of the soil, before chemical analysis is progressed. Obtain approval of a sample load on site of not less than 2m³. Retain for comparison with subsequent loads. Provide a full analysis from an approved testing station in accordance with 'Analysis for Topsoil'.

Physical Parameters:-

Clay (less than 0.05mm) 5-27%

Silt (0.002 – 0.05mm) 5-45%

Sand (0.05 – 2.00mm) 45-85%

(At least 50% of the total soil fraction should fall within the medium to coarse sand range)

Permeability 10-5 – 10-6 m/sec

Chemical Parameters:-

PH value (1:2.5 soil/water) 6-7.5 pH

Electrical Connectivity (1:2.5 soil/water) <1500 µS/cm

Electrical Connectivity (1:2.5 CaSO₄) <2800 µS/cm

Organic Matter (Walkey Black) 4.0 – 10.0%

Total Nitrogen (Dumas) >0.2%

Extractable Phosphorus (RB427) >26 mg/l

Extractable Potassium (RB427) >220 mg/l

Extractable Magnesium (RB427) >50 mg/l

- TOPSOIL ANALYSIS• All imported topsoil is to be analyzed
- Soil analyst: Submit proposals.
- Samples: Collect in accordance with BS3882.
- Submit:
- Declaration of analysis:
- Chemical analysis and contaminants;
- Maximum stone content, stone size and pH value;
- Nutrient content, pH value and textural classification;
- PH value and textural classification;
- Phytotoxic and CLEA elements; and
- Textural classification and maximum stone content.
- Report detailing soil analyst's recommendations.

The Landscape Contractor shall obtain a sample for analysis, to determine all of the requirements listed above.

The results and a brief analysis and interpretive report making comment on suitability of material in comparison to BS3882 and the specification included within this document, including recommendations for additives and/or amendments to bring sub-grade soil up to the required specification standard. Topsoil requirements and to support broadleaf native trees with particular reference to the requirement identified above and levels of metals and the likely effects of these on nutrient availability and protection of plant growth.

A certificate of Analysis should also be provided shall be submitted to the CA who may adjust the composition of any specified fertiliser of soil ameliorant and the rate of application, after examination of the Landscape Contractors cost. Where suitable amelioration is not possible the CA may reject the topsoil.

3.6 IMPORTED SUB-SOIL

- Quantity: All subsoil that is imported is to confirm to this specification.
- Standard BS 8601 – 2013 Subsoil.
- Source: Submit proposals.
- Crumb structure: Made up of discernible crumbs.

Visual examination:-

The subsoil shall have a defined granular, crumb or blocky structure and shall be reasonably free from non-soil material, brick and other building materials and wastes, hydrocarbons, plant matter, roots of perennial weeds and any other foreign matter or material or substance that would render the sand unsuitable for use. Provide the Landscape Architect (CA) a 1kg sealed sample bag of representative soil, for approval of the physical structure of the soil, before chemical analysis is progressed.

Physical Parameters:-

Clay (less than 0.05mm) 5-27%

Silt (0.002 – 0.05mm) 5-50%

Sand (0.05 – 2.00mm) 40-85%

Max. Stone Content (2 – 50 mm) 50% by weight

Max. Stone size in any dimension 75mm

Chemical Parameters:-

PH value (1:2.5 soil/water) 5.0-8.2

Electrical Connectivity (1:2.5 soil/water) <2000 µS/cm

Electrical Connectivity (1:2.5 CaSO₄) <2800 µS/cm

Organic Matter (Walkey Black) % <2.0

Potential Contaminants:-

Refer and comply with Integral Geotechnique's Specific Target Level for the imported Capping Layer Soils List attached at the end of this specification.

Subsoil is to be naturally occurring material, excavated from a level immediately below the vegetable topsoil down to a maximum depth of 2.0m from the original ground level with no stone or rubble material larger specified. The material shall be a friable consistency, free draining, free from extraneous material and pernicious weeds. The subsoil must contain no chemical or domestic refuse or pollutants that would be harmful to short term or permanent plant or animal life. The material will not be extreme in either alkalinity or acidity. It is not acceptable to use topsoil within subsoil layers.

All sources of material shall be stated and a 2m³ minimum sample shall be provided for analysis, inspection and approval prior to deliveries to site. All supplies thereafter shall conform to approved samples. The CA may reject any subsoil with high stone or rubble content.

3.7 SOILS FOR STRUCTURAL TREE PITS

Green Blue Urban Rootsoil 20 Topsoil

RootSoil 20 is a blend of quality sandy loam topsoil.

- Excellent friable texture
- Carefully controlled clay, silt and sand levels
- Well balanced organic content
- Meets stringent test standards

Or other approved equivalent

Amsterdam Tree Soil (ATS) Green-Tree Amenity Tree Soil :Topsoil

A blend of clay, silt and sand levels and organic content of blended PAS 100 green compost and should be compliant with BS 3882: 2015 for topsoil.

Green Blue Urban Rootsoil Subsoil

- Excellent friable texture
- Carefully controlled clay, silt and sand levels
- Meets stringent test standards

Or other approved equivalent

Amsterdam Tree Soil (ATS) Green-Tech Amenity Tree Soil :Subsoil

A blend of sand and quarried minerals with a higher clay and silt content than topsoil and should be compliant with BS8601:2013 for subsoil.

3.8 RIP SUBGRADE BEFORE LAYING SUBSOIL

Scarify subgrade to promote free drainage. The surface on which subsoil is to be placed will be thoroughly ripped to a depth of 200mm before subsoil placement. A cross-ripping effect will be achieved by two passes at an angle of 45 degrees to the edge of the strip at 90 degrees to one another. Remove all stones with largest dimension exceeding 50mm. ***If standing water is present on ripped surface inform the CA before placing subsoil***

3.9 LANDSCAPE WORKS

The proposed landscape works are

- Proposed planting beds.
- Proposed native blocks
- Proposed hedgerows
- Proposed trellis/fence with semi-mature climbers
- Proposed trees
- Amenity and wildflower grass areas.
- Provision of ecological log piles, hibernaculum, bird and bat boxes.
- Structural tree pits in hard landscaping carpark area
- Management for 5 years
 - Maintenance of landscaping for one year in landscape contract
 - four years by Client agent five years total.

3.10 PRODUCTS AND MATERIALS**3.11 TOPSOIL AND SUBSOIL**

Existing topsoil and subsoil to retained where possible and reused. The Site has limited topsoil and subsoil available.

Most will be imported topsoil and subsoil for new planting beds, tree pits, hedge trenches, native blocks and grass areas.

Topsoil and subsoil depths required for the soft landscaping

- 300mm topsoil 300mm subsoil in planting beds, hedges and native blocks.

- 300mm topsoil 600mm subsoil in tree pit
- 150mm topsoil and 150mm subsoil in grass areas.
- 75mm topsoil and 225mm subsoil for wildflower grass areas
- Structural Treesoil Topsoil 600mm and Structural Treesoil Subsoil 300mm

3.11 AMELIORANTS

ROOTDIP: Root-balled trees are used a solution of one part Seanure Root Dip to ten parts water be applied around the roots as part of the puddling-in planting system. Barerooted trees to be dipped in root dip solution.

ANTIDESSICANTS: All trees and evergreen plant material on arrival at site shall be sprayed with an appropriate antidessicant approved by the CA unless the temperature is below 10degC.

GREEN COMPOST: Green recycled compost shall be used which will have an organic and fibre content and some trace elements. It shall improve soil structure and help retain moisture. Green Compost to be made under strictly controlled conditions from green, organic recycled material. PAS 100 standard. Sample to be approved before full orders made. The supplier is to provide a sample and details of the compost components and approved by the Client before use on site.

Spread 50mm depth of compost on surface of all planting beds work into full topsoil depth.
Green Compost to be 10% tree pit and work into full topsoil depth.

To be obtained from a local supplier and sample approved before full load brought to site.

MULCH:

To be 40mm Blue Slate chipping 50mm thick laid over Geotextile weed membrane as indicated

To be bark mulch for native block at rear of store Melcourt Ornamental Bark Mulch to be used. The product shall consist of

- predominantly matured European Pine Bark with an even nominal particle size distribution of 5-35mm with minimal dust and fines and less than 5% wood content.
- The pH to be between 4.5 and 5.5.
- The product shall be pest, disease and weed free and not have been treated with Methyl Bromide or any additives.
- The product shall have been tested in accordance with the requirements of BS 4790:1987, for fire resistance.

Or other approved product with the same specification.

GEOTEXTILE WEED MEMBRANE

Terram Weedguard

Terram

[Tel:-01621 874200](tel:01621874200)

Email:-info@terram.com

For all planting beds except native blocks, hedges and nursery beds.

PERMEABLE ROOT BARRIER

The root barrier is to be Terram Rootguard which is a permeable root barrier. These are to be used in tree sides facing services or easements within 2.00m of tree stems

Terram

Fiberweb Geosynthetics Ltd

Blackwater Trading Estate

The Causeway, Maldon

Essex CM9 4GG

Tel: +44 (0) 1621 874200

email:info@terram.com

www.terram.com

3.12 ACCESSORIES

TREE TIES: Tree ties are to be Hessian webbing 50mm wide, wrapped around tree stem and nailed to the stakes with 40mm galvanized nails according to tree type.

TREE STAKES: Tree stakes shall be larch or sweet chestnut poles celcure treated, 75mm in diameter, straight with butt end Extra Heavy Standard Trees will have 2No stakes. The stakes are to be set 1200mm above ground.

SPIRAL RABBIT GUARDS

Green Tech Rainbow Bio Spiral Guards with a green tint. 60cm x50mm diameter

3.13 PLANT MATERIAL SUPPLY

PLANTS GENERALLY

Trees and plants are to conform to the relevant section of BS 3936 (publication series) and the National Plant Specification. No substitutes are to be accepted without the consent of the landscape architect and the local planning authority. All plants shall be true to size specified on the planting plan and schedule. All plants shall be healthy, bushy, pest and disease free and not pot-bound, dry, water logged, leggy or weak. A minimum of five breaks per shrub is required. Trees shall be vigorous, of good shape and with a well-branched head.

Plants that are container grown (CG):

- Supplied in a growing medium with adequate nutrients for the plant to thrive until permanently planted.
- Centred in the container, firmed and well-watered.
- With root growth substantially filling the container, but not root bound, and in a condition conducive to successful transplanting.
- Grown in the open for at least two months before being supplied.
- Grown in containers with holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

HANDLING AND DELIVERY: The Contractor shall comply with the recommendations of the booklet 'Plant Handling' published by the Committee for Plant Supply and Establishment in July 1985.

The Contractor shall include for packing, loading and transporting plant material, trees, etc from the source of supply to the site. All plant material shall be carefully packed and protected to survive transport to site without damage in lifting from the nursery, loading, transit or unloading. Any plant material which sustains major damage shall be rejected and replaced at the Contractor's expense, but slight mechanical damage may be corrected by careful pruning and wounds exceeding 25mm diameter shall be treated with fungicidal sealant.

If plants are not planted within 24 hours of delivery they shall be heeled in by placing the roots in a prepared trench covering them with fine soil and well firming and watering to prevent air pockets.

PLANT INSPECTION: The CA reserves the right to inspect all plant material prior, during and after planting and reject any plants that fail to meet a satisfactory standard.

TREES: They shall have either a well balanced head or well defined central leader with branches growing from the stem with reasonable symmetry and shall comply with the following definitions:

- Extra Heavy Standard Trees shall be rootballed. They shall be of a minimum height of 4.00-4.50m with a sturdy taper and reasonably straight stem minimum 1.75- 2.00m in height from ground level to the lowest branch with a minimum girth of 14-16 cms when measured 1.00m from ground level.
- Native Hedge Plants- Native Block Plants. These are to be strong well-rooted nursery stock evenly developed with a single well defined, straight and upright central leader. The main stem shall be furnished with lateral shoots. The plant shall be self supporting with a stem circumference at the root collar of 30-50mm. Overall heights as specified in the Plant Schedule. All whips are to be bareroot

CONTAINER STOCK TREES

Container stock trees are **not** to be used. Tree planting is to be undertaken in season.

POT GROWN SHRUBS: A shrub which is pot-grown or container-grown may, according to species, be cut back or trimmed to encourage bushiness. The size of pot shall be as stated in the Plant Schedule. The height of shrubs shall be measured from the ground level, excluding rootball or any container.

4.0 WORKMANSHIP - LANDSCAPE

4.1 SITE CONDITION

The Contractor shall be held responsible for the keeping of the Works in a neat, tidy and litter free condition through the duration of the Contract.

Litter means arisings or residues from the Works, cans, bottles, paper and other extraneous objects.

4.2 WATERING: Water is to be provided by the Principal Contractor and access without cost to the private water system. The Landscape Contractor is to supply hoses and sprinklers and ware as necessary up to Practical Completion and as necessary during the defects/maintenance period.

Quantity: Wet full depth of topsoil.

Application: Even and without displacing plants, mulch or soil.

Frequency: As necessary to ensure the establishment and continued thriving of all seeding/turfing and planting.

Watering for planting of trees, shrubs and whips after planting and if dry conditions occur

DROUGHT CONDITIONS: If water supply is or is likely to be restricted by emergency legislation:- inform the CA without delay of the additional cost of second class water supply from a sewerage works or other approved source.

- if planting has not been carried out, do not do so until instructed.
- if planting has been carried out, obtain instructions on supply of water.

PERMANENT DRAINAGE SYSTEM: This is not to be used for disposal of water from excavations without approval.

4.3 FORMATION OF GENERAL GROUND LEVELS

The levels of the site of the site will be as the Architect's or engineer's details

New ground levels need to be as required by the Engineer for paving edges and other hard surface edges and left ready for soil profiling if required to the required depth for the finish of shrub or shrub and tree planting so that the finished topsoil levels can be 50mm below finished hard edging adjacent to the building and within the carpark areas.

The areas shall be excavated or filled to the correct depth for the soil profile.

The subbase material in the excavated bed areas, grass areas and planting pits are to be broken up to a depth of 200mm as required,

4.4 SOIL PROFILE FORMATION

LOOSE TIP FILLING FOR LANDSCAPE AREAS

SUBSOIL FILL

Do not firm, consolidate or compact when laying.

Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

PLACING FILL GENERALLY

- Ensure that areas to be filled are free from loose soil, rubbish and standing water.
- Do not use frozen material or materials containing ice. Do not place fill on frozen ground.
- Take all necessary precautions to secure the stability of adjacent structures.
- Place fill against structures, or buried services in a sequence and manner that will ensure stability and avoid damage.
- Plant employed for transporting, laying and compacting must suit the type of material. ie light earth moving plant to be used for all subsoil areas.
- Earthmoving equipment: Vary route to avoid rutting.
- Filling: Layers not more than 300 mm thick.
- Lightly compact each layer to produce a stable soil structure when grading them to an even level..

4.5 HANDLING TOPSOIL

Standard: To BS 3882 : 2015.

- Ensure topsoil is free of aggressive weeds weed species: Included in the Weeds Act, section 2 or the Wildlife and Countryside Act Schedule 9, part II.
- Give notice: Obtain instructions before moving topsoil.
- Multiple handling: Keep to a minimum. Use topsoil immediately after stripping.
- Areas to be topsoiled are to be laid over the finished subsoil levels.
- Topsoil areas to be graded to be 50mm below finished edging levels.
- Do not use topsoil contaminated with subsoil, rubbish, oil based products or other materials toxic to plant life.
- Dispose of contaminated topsoil to the Contractor's tip
- Apply herbicide to perennial weeds and allow period of time recommended by manufacturer to elapse before cultivating

SPREADING TOPSOIL DEPTH to the depths specified

Once spread the topsoil shall be kept free of weeds by physical means or by spraying with an approved weedkiller until such a time as planting is carried out.

GREEN COMPOST

PLANTING BEDS/NATIVE BLOCKS AND HEDGES

- Spread 50mm layer of Green Compost and cultivate into full depth of topsoil.
- Reduce top 100mm of all topsoil to a fine tilth suitable for final grading
- Remove all undesirable material brought to the surface, including stones larger than 50mm in any dimension, roots, turf or grass and foreign matter.
- Cultivation and planting shall not be carried out when the soil is very wet or waterlogged, or during periods of frost.
- At all times during ground preparation care shall be taken not to re-compact the soil.

5.0 PLANTING GENERAL

- 5.1 CLIMATIC CONDITIONS:** Carry out the work while soil and weather conditions are suitable for the relevant operations. Do not plant during periods of frost or strong winds. Plant only during the following periods:

- Deciduous trees and shrubs: Late October to late March
- Container grown plants: At any time if ground and weather conditions are favourable.
- Ensure that adequate watering and weed control is provided.

NOTICE

Give notice before:

- Setting out.
- Delivery of plants/ trees.
- Planting shrubs.
- Planting trees

5.2 TREE, SHRUB PLANTING

Planting shall be carried out in accordance with the Plant Schedules and the Contract Drawings.

SETTING OUT: All areas shall be set out in accordance with the Contract Drawings.

PLANT SPACING: Plant spacing shall be carried out in accordance with the Contract Drawing. The CA reserves right to adjust the exact position of all plant material after it has been set out.

The aim will be to space the plants evenly so that when established they will completely fill the areas indicated as fully as possible.

NEW PLANTING AREA

Prior to the placing of topsoil and subsoil ensure existing ground under is thoroughly broken up to a depth of 200mm to allow free drainage.

Remove all rubble, concrete washings, and other builder's debris to provide sufficient depths for topsoil placement. Cut back excessive haunching where it restricts topsoil depths. Excavate tree pits into subgrade prior to top soiling to ensure sufficient depths of soil. Mark tree pit locations with timber stakes.

PLANTING AND CULTIVATION: All planting shall comply in all respects with BS 4428: 1968 General Landscape Operations and for Tree Planting BS 8545: 2014. All plants shall be planted in accordance with good horticultural practice, upright with the roots well spread out at same depth at which they had been previously grown in the nursery. Care being taken to avoid damage to root systems and stems. The plants shall be placed in position in accordance with the Contract Drawings showing their best side to the front. Suspended planting and cultivation when weather or soil conditions are unsuitable.

Cultivations are as previously specified. Soil to be free of weeds prior to commencing planting works, where necessary the topsoil will have weeds removed by physical means or will be treated with weedkiller where necessary to destroy weed growth prior to commencing planting.

Evergreens to be dipped in or thoroughly sprayed with antidessicant after planting. Do not apply in rainy or frosty weather. Ensure full coverage of underside of foliage.

ROOT BARRIERS

Root barriers are to be used where trees are within 2.00m of service runs. The root barriers are to be either installed vertically or laid to line service trenches where appropriate. The root barrier is to be Terram Rootguard which is a permeable root barrier.

Terram

Fiberweb Geosynthetics Ltd

Blackwater Trading Estate

The Causeway, Maldon

Essex CM9 4GG

Tel: +44 (0) 1621 874200

email:info@terram.com

www.terram.com

5.3 EXTRA HEAVY STANDARD TREES

These are to be planted in Planting Beds around the site

- Tree planting within the carpark planting beds of the Lidl a Store and Retail Units..
- Planting in the Native Block 2 at the rear of the Lidl Store.
- Planting in the rear grass area of the Nursery.

General

- At planting the localized tree pit dug shall be not less than minimum dimensions or 1200 x 1200mm x 900mm depth. Allow the tree at planting to have the root flare at finished topsoil level. (this may be the soil mark on the nursery stock. Check this is the root flare point before planting. Correct planting depth is important.)
- Water rootball of rootballed trees with seaweed extract root dip.
- All wires hessian and other rootball wrapping to be removed at planting.
- Trees need to be orientated for the best crown development. It might be found that due to the nature of growing trees on nursery lines crowns develop asymmetrically.
- Tree pit is backfilled with imported subsoil 600mm depth and imported topsoil 300mm depth.
- Add 10% Green Compost is to be mixed in thoroughly into top 150mm of the topsoil backfill.
- The returned soil shall be lightly consolidated by treading as filling proceeds layer by layer with subsoil replaced first and then topsoil in layers above the subsoil
- The tree shall be set upright in the centre of the tree pit so that the soil level after settlement will be at the original soil mark on the tree stem.
- The two stakes shall be driven into the pit 150mm from the edges and fixed before backfilling
- The returned soil shall be finely broken down and placed around the roots gently shaking the tree to allow particles to work around the rootball and ensure close contact with all rootball and prevent air pockets. The returned soil shall be lightly consolidated by treading as filling proceeds layer by layer, care being taken to avoid damaging the rootball. Soil around the root flare of the tree shall be consolidated firmly with the heel.
- Secure the tree to the stakes with Hessian webbing 50mm wide wrapped around tree stem and nail the webbing to the stakes with galvanised nails. The stakes are to be 75mm diameter set 1200mm above ground level.
- Water tree thoroughly after planting.
- Trees in planting beds will be in beds with a slate mulch.
- Trees in Native Block 2 and the rear of the nursery in grass areas. Supply and spread a 900mm bark mulch 10mm thick at edges rising to 50mm by tree stem.
- Supply spiral guards to trees at rear of Lidl Store.

5.4 STRUCTURAL TREE PIT IN THE CARPARK AREA

There are 6 structural tree pits in the carpark area using Green Blue Urban Tree Pit construction. Construct the pit in accordance with manufacturer's recommendations for a pit size of 3485 square depth 1175mm depth below hard surface construction depth. Pit to be lined with 200mm drainage layer to base and sides (included in overall dimensions)

Green Blue Urban

01580 830 800

enquiries@greenblue.com

- 2No in the centre of carpark with a raised kerb on all sides around the 1200mm square tree grille frame.
- 4No are at the edge of a walkway with 50% on the frame and tree grille at path level and 50% extending into carpark area with kerbed edges
- Kerbing and walkway to be detailed by others.
- Proposed tree location 3400 x 3400mm cross section to 1175mm depth ensure there is no conflict with services.
- Compact the subbase and drainage connection to structural engineer's requirements.
- Supply and lay a 200mm deep clean 10-20mm angular stone layer over the subbase with 100mm perforated pipe within the drainage layer linking to the surface water system.
- (where subbase is below 3% CBR additional geonet to be placed in the drainage layer to Engineer's assessment).
- Supply and fix plastic open reinforcing mesh 20mm aperture laid below and around the sides of the RootSpace structure.
- Supply and fix root barrier to the face of the pit facing services.
- Supply and install the lower layer of 500 x 500 x 300mm RootSpace Units/Modules across the trench area.
- Ensure Arborguy earth anchors and anchor plate is fixed in place.
- Infill the units with RootSoil Subsoil 300mm depth increasing to 600mm below tree
- Supply and install the upper layer of 500 x 500 x 600mm RootSpace Units/Modules across the tree pit
- Ensure Arborguy earth anchors are carried in place..
- Infill the units with RootSoil 20 Topsoil
- Fix 500 x 500 x 75mm Aeration caps to the top of units under the footpath away from proposed RootDirector location.
- Lay twinwall geonet over the aeration caps
- Allow for Arborvent 150 double inlet aeration/irrigation system with cast inlets fitted to RootSpace Airflow inlet at 2.00m spacings
- Supply and fix the RootDirector medium
- Kerbing and walkway construction to be detailed by others
- Supply and fix flat footpath edges or kerb edges set on a concrete haunch to support the tree grille frame.
- Water rootball of rootballed trees with seaweed extract root dip.

- Remove all non perishable wrappings prior to planting. Perishable wrappings – hessian and non galvanized chicken wire basket retained until the tree is in position. Then peel back and remove the perishable parts from the top third of the rootball.
- Trees need to be orientated for the best crown development. It might be found that due to the nature of growing trees on nursery lines crowns develop asymmetrically.
- Supply and fix a Single Inlet Aerator/Watering/Feeding System around the tree rootball.
- Fix the earth anchor collar to the tree and secure the tree in an upright position within the RootDirector
- Supply Rootsoil 20 mixed with RootStart Mycorrhiza Fungi at manufacturer's recommended rates to the RootSoil and lightly compact around the rootball within the RootDirector.
- Water tree thoroughly after planting.
- Kerbing and walkway construction to be detailed by others
- Supply and fix a galvanized steel support frame and supply and fix a GreenBlue 1200 x 1200mm square Ullswater 1200mm square tree grille around the tree.
- Fix Ullswater steel tree guard 1800mm high x600mm diameter including tree guard tie.
- Infill tree grille spaces with a porous Aboresin gravel (porous resin bound gravel).

Any drainage required to link the drainage layer to the existing surface water drainage system is to be specified and detailed by the Engineer

5.5 HEDGE PLANTING : HEDGES 1-8

Hedges 1-5 are native hedges – plant in double staggered rows at 0.30m centres in the Lidl and Retail carpark. All these hedges have a fence through their centre line.

(NOTE Hedge 3 lies over the service easement).

Hedges 6 and 7 are internal hedges in the rear of the Nursery

Hedge 8 is a native hedge single line infill at 0.30m cts in front of the retained hedge section.

All container grown plants shall be well-soaked in water with alginure root dip in the water prior to planting and planted into the trench area and all bare-rooted plant material to be dipped into alginure root dip prior to planting.

- Excavate hedge trench 1000mm wide to a depth of 600mm.
- Break up base of hedge trench to a depth of 300mm
- NOTE install centerline fences in carpark areas
- NOTE supply and lay a permeable root barrier in the base of Hedge3 over the easement.
- Spread 300mm depth of imported subsoil and 300mm depth of imported topsoil over the trench.
- Cultivate trench and work in Green Compost, 50mm layer spread over area to full topsoil depth. Remove any debris arising from cultivations.
- Water the hedge plants thoroughly after planting.
- Supply and spread a layer of Slate Mulch 50mm deep over area of hedge trenches to Hedges 1-5 and Hedge 8.
- Supply and spread a 50mm layer of bark mulch over Hedge 6 and 7 in the rear of the Nursery.
- Water plants thoroughly after planting

5.6 WIRE MESH FENCING TO CENTRE OF DOUBLE STAGGERED ROWS OF NATIVE HEDGEROWS where fences are indicated in the carpark area hedges

To BS1772 Part 1.

Height: 1100mm

Mesh: Galvanized rabbit proof mesh

Wire: 4No straining wires, mild steel (8SWG) galvanized to BS 443, clipped to woven wire at 500mm intervals.

Staples: 30 (8SWG) galvanized or sheradised. Angle all staples; securely knock in at all posts.

Posts and struts: Natural debarked softwood round struts and posts.

Treatment: Pressure impregnated to BS 4072 and BS 5589

Maximum centres of posts.

Straining posts: 100m in straight runs, or adjusted equidistant if end sections are less; at ends, corners, changes of direction or acute changes in level.

Intermediate posts: 3.0m centres

Method of setting posts:

Straining posts: 100mm section x 2050mm posts set in augured hole, backfilled with 400 x diameter 750mm well rammed aggregate and remainder 50mm to surface with topsoil arising from excavation.

Dispose of surplus off site.

Struts: 75mm section x 2000mm strut, notched to straining post and set in hole, backfilled with 375 x 850 x 500mm well rammed aggregate and remainder 100mm to surface with topsoil arising from the excavation.

5.7 ORNAMENTAL PLANTING BEDS 1-13

Supply and plant shrubs at spacing indicated on the Contract Drawings and of species and sizes indicated on the Plant Schedule.

All container grown plants shall be well-soaked in water with alginure root dip in the water prior to planting

- Excavate planting beds to a depth of 600mm.
- Break up ground under to a depth of 300mm.
- Spread 300mm depth of imported subsoil and 300mm depth of imported topsoil over area.
- Cultivate planting beds and work in Green Compost, 50mm layer spread over area to full topsoil depth. Remove any debris arising from cultivations.
- Supply and lay a geotextile weed membrane with a minimum overlap of 200mm and holes cut for planting. Sufficient pins to be installed to prevent membrane lifting.
- Supply and spread a layer of Slate Mulch 50mm deep over the area.
- Supply and spread a 50mm layer of bark mulch over Bed12 in the rear of the Nursery.
- Water plants thoroughly after planting

5.8 NATIVE BLOCKS

Supply and plant plants and underplanting of species and sizes indicated on the Plant Schedule and Drawings.

All container grown plants shall be well-soaked in water with alginure root dip in the water prior to planting and planted into the trench area and all bare-rooted plant material to be dipped into alginure root dip prior to planting.

Native blocks occur in 3 different locations

- Western side of the Lidl carpark.
- A block at the rear of the store and wraps round the loading bay with no public access.
- At the side of the nursery building facing the north estate road.

General area preparation

- Excavate native blocks to a depth of 600mm.
- Break up ground under to a depth of 300mm.
- Spread 300mm depth of imported subsoil and 300mm depth of imported topsoil over area.
- Cultivate native blocks and work in Green Compost, 50mm layer spread over area to full topsoil depth. Remove any debris arising from cultivations.

Lidl Native Block 1

- Plant at 1.00m centres.
- Supply and lay a geotextile weed membrane with a minimum overlap of 200mm and holes cut for planting. Sufficient pins to be installed to prevent membrane lifting in the caraprk bed.
- Supply and spread a layer of Slate Mulch 50mm deep over the area.
- Water plants thoroughly after planting.

Lidl Native Block 2

- Plant at 1.20m centres.
- Supply and spread a 50mm depth of bark mulch in a 500mm diameter around each plant.
- Supply and fix spiral guards to the plants.
- Water plants thoroughly after planting.
- General block area to be cultivated and seeded with Emorsgate EH1 Hedgerow Mix

Native Block 3 By Nursery side elevation

- Plant at 1.00m centres.
- Supply and spread a 50mm bark mulch across the nature conservation area.
- Water plants thoroughly after planting.

5.9 LOG PILES AND HIBERNACULUM IN REAR OF STORE NATURE CONSERVATION AREA

LOG PILES 2No in nature conservation area at rear of store.

7No Logs from felled site trees even size approx 150mm diameter and 750mm long. Covered with a layer of turf. Leave front and rear faces open.

HIBERNACULUM

Dig a pit 1200 x 1200mm square 500mm depth. Infill split logs, rock, dead wood and bricks loosely filled with topsoil with about 150mm above ground level. Cover with a layer of turf. Leave front and rear faces above ground level open.

5.10 FENCE AND SEMI-MATURE CLIMBERS

Supply and Install Jackson Fencing Venetian Hit and Miss Panels

Jackson Fencing
Email: sales-bath@jacksons-fencing.co.uk
 01761 232 2666
 0800 408 2234

- The fence is at the rear of the Retail Units and at the rear of Planting Bed 7.
- There will 19 panels and the end panels will be 1.51 m height and the central panels will be 1.81m height.
- Fence to have gravel boards at the base and capping rail.
- Use slotted posts to be used and installed to manufacturer's recommendations
- Panels 1.83m width and panels come in 0.607m and 0.907m and are stacked in the slotted posts to give 1.51 and 1.81 heights.
- Semi-mature Climbers are to be planted in pits 100mm wider than the pits and the frame with the climbers retained and climbers frame attached to the fence. Climbers to be trained along the fence.

5.11 PROTECTIVE FENCING

If necessary protective fencing will be erected to protect completed works where necessary where other adjacent works are in progress and there is a risk of damage by others of completed landscape works

5.12 DEFECTS LIABILITY

All tree, hedge, native, climbers and shrub planting is to be maintained for 5 Years after Practical Completion (1 Year as part of contract and 4 years with managing agent).

All planting completed prior to Practical Completion of the whole soft Landscape works is to be maintained as per maintenance requirements until Practical Completion.

After planting remove all soil from hard surfaces and leave all areas in a clean and tidy condition at Practical Completion.

FAILURES OF PLANTING: Post Practical Completion maintenance of the planting is to be carried out by the Contractor as specified. Any tree/shrubs/plants which are dead, dying or otherwise defective at the end of each growing season within the Defects Liability Period will be regarded as defects due to materials or workmanship not in accordance with the Contract. They must be replaced by approved equivalent tree/hedge/shrub/plant material at the next suitable planting season unless otherwise instructed.

This will not apply if defects are caused by malicious damage after Practical Completion.

6.0 GRASS SEEDING : NEW GRASS AREAS

Areas for grass establishment are as indicated on the Contract Drawing.

- Amenity Grass Area at rear of Nursery is Conservation Grass Mix seeded at rate of 30gms per square metre.
- Wildflower Grass Areas are to be EM2 Standard General Purpose Meadow Mix or EH1 Hedgerow Mix seeded at the rate of 4gms per square metre

All works specified shall be carried out in accordance with BS4428 "Recommendations for General Landscape Operations Section 5"

SEEDED AREA REQUIREMENT

- Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds (undesirable species) and disease.
- Appearance: A closely knit, continuous ground cover of even density, height and colour for grass areas.

CLIMATIC CONDITIONS

- General: Carry out the work while soil and weather conditions are suitable.

NOTICE

Give notice before:

- Setting out.
- Applying herbicide if appropriate..
- Preparing seed bed.
- Seeding.

SETTING OUT

- Boundaries: Mark clearly.
- Delineation: In straight lines or smoothly flowing curves as shown on drawings.

6.1 GRASS OPERATIONS

- Areas to be excavated out as necessary for spreading subsoil and topsoil.
- Prior to subsoil and topsoil spreading break up ground under to a depth of 300mm
- Supply and spread topsoil to required depths

GENERAL GRADING

- Topsoil depth and type varies according to substrate type for different seed mixes: reasonably dry and workable.
- Amenity Grass rear of Nursery imported soil 150mm topsoil 150mm subsoil
- Wildflower Grass Areas side of Nursery imported soil 75mm topsoil 225mm subsoil
- NOTE Native Block 2 soil depths 300mm topsoil and 300mm subsoil which is then seeded with EH1 Hedgerow Mix.
- Contours: Smooth and flowing, with falls for adequate drainage.
- Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
-

GENERALLY SEEDING OF GRASS AREAS

- Care will be required when programming seeding of grass areas to ensure that completed seeding is not damaged by trafficking by others or additional works being undertaken in grass areas after seeding.

PROTECTIVE FENCING

- If necessary protective fencing will be erected to protect completed works where necessary where other adjacent works are in progress and there is a risk of damage by others of completed landscape works.

6.2 AMENITY : CONSERVATION GRASS AREA

This is the rear area of the Nursery

- Amenity Grass rear of Nursery imported soil 150mm topsoil 150mm subsoil

CULTIVATION

The topsoil is to be free of weeds prior to commencing seeding works.

Before seeding the areas shall be raked to provide a suitable tilth, all stones larger than 50mm shall be removed from the surface and removed from site to the Contractor's tip.

SOWING

The Contractor shall obtain approval of the prepared soil before seeding. Supply and cross sow with the grass mix specified. After sowing once seeds have germinated - the seeded areas are to be lightly cross raked and rolled.

INITIAL GRASS CUTTING:

After the seed has germinated a first cut is to be made when the grass has reached 65mm in height and cut to 50mm height. A second cut shall be given to grass when it has reached 75mm reducing it to 40mm.

Arisings are to be removed from the grass areas.

GRASS AREA WATERING.

The Contractor shall water the sown grass areas as necessary and agreed with the CA as failure due to drought will be the sole responsibility of the Contractor.

6.3 WILDFLOWER GRASS AREA

- 225 mm subsoil and 75mm topsoil minimum stone content Nursery Verge
 - EM2 Emorsgate Standard General Purpose Meadow Mixture seed at rate of 4gms per sq metre.
- 300mm topsoil and 300mm subsoil Native Block 2 at rear of Lidl store.
 - EH1 Hedgerow Mix seed at rate of 4gms per sq metre.

CULTIVATION

All soil areas are to be free of weeds prior to commencing seeding..

Before seeding the areas shall be raked to provide a suitable tilth, all stones larger than 50mm shall be removed from the surface and removed from site to the Contractor's tip.

SOWING

The Contractor shall obtain approval of the prepared soil before seeding. Supply and cross sow with the grass mix specified. After sowing once seeds have germinated - the seeded areas are to be lightly cross raked and rolled.

INITIAL GRASS CUTTING: WILDFLOWER GRASS AREAS

After the seed has germinated a first cut is to be made when the grass has reached 75mm in height and cut to 50mm height.

GRASS AREA WATERING.

The Contractor shall water the sown grass areas as necessary and agreed with the CA as failure due to drought will be the sole responsibility of the Contractor.

6.4 DEFECTS LIABILITY

FAILURE OF SEEDING BEFORE PRACTICAL COMPLETION)

If germination has failed within one month of original seeding the above shall be repeated until a total grass cover is achieved. If turf fails before Practical completion it is to be replaced.

Grass Areas - Bare areas and areas of dead grass which are apparent at Practical Completion will be regarded as defects and must be made good by recultivation and seeding at times agreed with CA.

FAILURE OF SEEDING (AFTER PRACTICAL COMPLETION)

Grass Areas - Bare areas and areas of dead grass which are apparent after Practical Completion will be regarded as defects and must be made good by recultivation and seeding at times agreed with CA.

6.5 PRACTICAL COMPLETION FOR GRASS SEEDED AREAS

Grass areas will only be accepted for Practical Completion when germination is seen to be even and of correct density and all weeds removed and the first cut has been satisfactorily undertaken.

No individual areas of grass area will be accepted for Practical Completion until the entire landscape works are completed to the satisfaction of the CA.

Should Practical Completion be delayed all grass areas shall be maintained in accordance with the specification for maintenance.

6.6 CONSERVATION GRASS AREA MAINTENANCE UNTIL PRACTICAL COMPLETION

MOWING : The Contractor shall maintain grass heights all year to a maximum height of 60mm and a minimum height of 30mm. **Arisings shall be removed after the first cut and thereafter evenly dispersed.**

When conditions are dry ensure that the grass is not cut too short

Water as necessary

WEEDKILLER TREATMENT IN CONSERVATION GRASS AREAS.

While actively growing, spot weed treat grass areas with a suitable approved weedkiller to kill vigorous perennial weeds such as thistle, ragwort, rosebay willow herb, knotweed and docks and bramble regrowth
Retreatment as required is to be carried out during September.

6.7 WILDFLOWER GRASS AREA MAINTENANCE UNTIL PRACTICAL COMPLETION

NURSERY VERGE MOWING :

The first growing season, the new wildflower and grass areas should be cut regularly (one cut per Month from March-October inclusive) to approximately 50mm to control annual weeds

Water as necessary

NATIVE BLOCK 2 STRIMMING :

The first growing season, the new wildflower and grass areas should be cut regularly (one cut per Month from March-October inclusive) to approximately 50mm to control annual weeds

Water as necessary

7.0 LANDSCAPE MAINTENANCE

MAINTENANCE PERIOD FIVE YEARS: CONSTRUCTION MAINTENANCE PERIOD IS YEAR 1 AND FOLLOWING 4 YEARS BY THE CLIENT'S MANAGING AGENT.

INSPECTIONS AND MONITORING

Landscape monitoring - Annual defects checks to be made in following 4 years to assess defects replacements and monitor the landscape establishment.

Ecologist to receive annual Landscape reports

Ecologist to undertake inspections in Year 2 and 4 with additional inspections if the landscape report raises issues.

7.1 Definitions

CA: Contract Administrator shall mean the agent appointed by the Client

7.2 Programming and site attendance

PROGRAMME OF WORKS: The Contractor shall provide a programme of maintenance works at the commencement of the Contract The Contractor shall maintain an operation plan that demonstrates the monthly progress and the month in advance. The operational plan is to include management objectives to achieve this plan.

SITE ATTENDANCE: The aim of this item is to ensure that small matters are corrected.

The Contractor shall attend to incidental matters which are defined as follows:

- inspect the site and undertake as necessary litter picking, sweeping, leaf clearance and other maintenance items which require attention in key areas such as at the site entrance, car parking areas and entrances to Buildings
- 'making-safe repairs' to such items as staked trees, fencing etc
- 'making safe' any hazardous items on site eg damaged service covers etc (full repair to be undertaken by Employer's CA.
- reporting to CA any matters requiring more than one hours attendance or requiring specialist work.

MAINTENANCE RETURNS

The Contractor shall submit a monthly maintenance return issue this to CA and copy it to the CA.

7.3 Removal of arisings:

The Contractor shall remove all leaves, litter, rubbish, dirt and other arisings shall be swept up, collected and disposed of on the same day as the various items of work are undertaken. These arisings shall be collected and unsuitable material disposed off at the Contractor's tip. The Contractor shall take sole responsibility for providing a tip and for all charges, fees, transport and any other expenses in connection with tipping unless otherwise specified in writing by the LA.

Where indicated arisings are to be dispersed.

Ornamental planting beds and trees within ornamental areas arisings are to be removed from site.

Note all green waste arisings is to be recycled via local recycling facilities as the site has not suitable locations for composting material or operations for reusing composted material.

7.4 Inspections

During maintenance operations the Contractor shall note and report without delay to the CA any of the following:

- activities by others which prevent the normal maintenance operations proceeding in the site areas egg Statutory Authorities work, new constructions, storage of materials and parking on landscape areas etc.
- damage caused to the site areas by the activity of others on site.
- missing gulley covers or damaged service covers noted during the course of the works.
- damage to boundary fences, other fences, railings and other features for which the Employer is responsible.
- persistent litter problems
- theft or malicious damage, or clearly unauthorized use of the site areas
- damage to building structures within site area

Inspect trees after high winds. Refix newly planted trees upright as necessary.

8.0 TREE MAINTENANCE: GENERAL

The Contractor is to take care not to damage tree stems, any damage or tree death resulting from damage shall be made good at the Contractor's expense.

EXISTING TREES

Check trees annually and after high winds and undertake any remedial actions required.

8.1 STAKED TREES

INSPECTING TREES

- Inspection of new trees should be monthly in the first year and bi-monthly thereafter and after high winds to assess remedial work needed due to storm damage, clearing of dead trees, prevention of trees overhanging roads and footpaths.

PEST AND DISEASE CONTROL: The Contractor shall report to the CA any indications that pest or disease control treatment is required. Allow for one application of a treatment approved by the CA. Report any squirrel damage noted to CA.

TREE REMOVAL: Remove dead or dying or trees which are poorly located after obtaining approval from the CA. Where the tree is removed from a grass area reinstate soil levels to marry with adjacent levels and seed with an approved mix.

REFIRMING: Ensure that all trees remain firmly bedded in the ground after strong winds, frost and other disturbances. Refirm by treading around the base. Any 'collars' forming at the base of the trees shall be broken up and then backfilled with topsoil.

STAKED TREES

- Check tree stakes for firmness and signs of rot or damage.
- Refirm or replace as required. Tree stakes to be supplied by the Contractor at his sole cost to be suitable for the size of tree to be staked, fully tanalised, round, peeled and pointed at one end.
- Tree stakes should be removed after three growing seasons. If the tree has failed to anchor at this time the tree is to be replaced.

- Check all tree ties. Remove, adjust, refix or replace if broken. Ties to be supplied by the Contractor at his/her own expense. The make of replacement ties must be approved by the CA before use on site. Ties to be nailed securely to the stake.
- Remove spiral guards from trees at rear of Lidl Store in Year 3.
- Provide aeration where compaction is considered to be one cause for poor tree condition.
- Trees are within planting beds, grass areas and Native Block 2.
- Top up bark mulch around trees in grass areas and Native Block 2 in Year 1 and Year 2.

GENERAL

- Water as necessary during dry periods
- Any trees which die or are otherwise defective during the 5 year Defects/Maintenance Period shall be replaced at the Contractor's cost in the next November and March planting season.

These works to staked trees are to be carried out **between September and February each year unless specified otherwise and when necessary during the remaining part of the year – work should be undertaken when trees are dormant.**

EARTH ANCHOR TREES

- Adjust earth anchors as necessary to ensure the tree is retained in a vertical position
- Apply foliar feed in first two years to manufacturer's recommendations
- Water as necessary during dry periods
- Any trees which die or are otherwise defective during the 5 year Defects/Maintenance Period shall be replaced at the Contractor's cost in the next November and March planting season.

PRUNING TREES as follows:

- Remove dead or damaged branches and cut back any ragged edges of wounded bark back to healthy tissue.
- Remove side growths beneath the crowns and any suckering growth from tree base. All cuts to be pared back flush to the stem, trunk or scar tissue.
- Where tree in very poor condition tree removal may be required.
- Pruning shall be undertaken once per year during between October and February. The use of chainsaws and the like will not be permitted, unless instructed by the CA.

9.0 MAINTENANCE OF PLANTING BEDS: GENERAL REQUIREMENTS

PEST AND DISEASE CONTROL: The Contractor shall report to the CA any indications that pest or disease control treatment is required. Allow for one application of a treatment approved by the CA. Pest and disease control includes for the control of slugs, snails or any other pest (not vermin) which adversely affects plant material. Repeat treatments are to be made as necessary. Report any rabbit damage noted to CA.

REFIRMING: Ensure that all shrubs remain firmly bedded in the ground after strong winds, frost and other disturbances. Refirm by treading around the base. Any 'collars' formed at the base of the shrubs shall be broken up and then backfilled with topsoil.

AERATION : Where the bed is compacted or the soil water logging aerate the soil avoiding damage to any underground plant rhizomes etc and avoid damage to underground services where these occur.

9.1 WEEDING PLANTING BEDS: All planting beds are to be kept weed free at all times. The Contractor is to provide a list of suitable herbicides for use in planting beds and obtain the written approval of the CA.

CONTROL WEEDING - Control weeding means applying an appropriate weedkiller at the beginning of the growing season and thereafter the areas are to be checked once a month in season and any weeds spot treated with an appropriate weedkiller. Initial weedkiller application to be undertaken during mid/late Spring each year **and be completed by 10 June**. This treatment is for newly planted beds .

NOTE CHECK THAT HERBICIDE USED IS SUITABLE FOR USE ACCORDING TO THE PLANT COMPOSITION OF THE BED IF NOT HANDWEED.

9.2 BED MAINTENANCE

MAINTAINING SLATE MULCHED BEDS: During weeding and maintenance operations do not incorporate mulch into the underlying soil. Each Autumn rake over the slate mulch to provide a neat and tidy appearance.

MAINTAIN BARK MULCHED BED 12

During weeding and maintenance operations do not incorporate mulch into the underlying soil. Top up bark mulch in Year 1 and Year 2.

PLANTING BED EDGES: On one occasion per year the soil at edges of planting beds shall be reduced to 50mm below the adjacent hard or grass surface. The resulting soil shall be removed. Care shall be taken to ensure that the bed edges against grass areas are well defined unless otherwise directed by the CA.

NOTE; Where good horticultural practice for the particular shrubs/plants within a bed require a specific fertiliser treatment this shall be applied.

DISEASES: The CA shall be notified of any pest or disease outbreaks. If cutting out diseased material all implements shall be sterilized between shrubs to prevent spreading the pathogen

CONTROL OF UNSUITABLE VEGETATION

During routine visits inspect plantings for sucker growth, and unsuitable/atypical growths and feathers on stems and remove at the point of origin.

- 9.3 PRUNING SHRUBS AND GROUND COVER:** All pruning is to be carried out in accordance with the correct horticultural practice for the type of shrub. Vary the amount and nature of the pruning, trimming and shaping according to the species, stage of growth, season and required visual effect.

GENERAL

The Contractor shall allow for pruning once a year, and trimming of vigorous species as necessary through the year.

In all cases dead, diseased and damaged material shall be removed.

Where necessary remove growth encroaching onto footpaths, roads, hard areas, grassed areas, signs, lights, sightlines and other features and if directed by the CA.

- Trim as necessary the species to prevent straggly growth or growth beyond the bed limits, reduce the height of shrubs to free tree stems as directed, trim to maintain tall shrubs at a defined height and round off the planting as directed to provide a neat appearance.
- Any plants which die or are otherwise defective during the 5 year Defects/Maintenance Period shall be replaced at the Contractor's cost in the next October and March planting season.

ALL ARISING FROM PRUNING SHALL BE SHREDDED AND REMOVED FROM SITE AS GREEN WASTE.

PRUNING GENERALLY: The CA will give directions on site for all planting beds to indicate the approach to be adopted for pruning beds and the effect required.

PRUNING EQUIPMENT: The Contractor shall use only two bladed secateurs or other cutting equipment approved by the CA. All cut ends shall be left with a clean finish.

The adjacent plantings should not over run one another and judicious pruning of the shrubs should be undertaken to achieve the best visual effect.

CLIMBERS : Train climbers on to fence. Cut back excessive growth and keep within fence panels.

10.0 HEDGE MAINTENANCE

- Ensure that all plants remain firmly bedded in the ground after strong winds, frost and other disturbances.
- Refirm by treading around the base. Any 'collars' forming at the base of the plant shall be broken up and then backfilled with topsoil
- Provide aeration where compaction is considered to be one cause for poor plant condition.
- Spotweed treat slate mulched trenches.
- Any plants which die or are otherwise defective during the 5 year Maintenance Period shall be replaced in the next October and March planting season.
- **MAINTAINING SLATE MULCH:** During weeding and maintenance operations do not incorporate mulch into the underlying soil. Each Autumn rake over the slate mulch to provide a neat and tidy appearance
- **MAINTAINING BARK MULCH:** During weeding and maintenance operations do not incorporate mulch into the underlying soil. Each Autumn rake over the bark mulch to provide a neat and tidy appearance. Top up mulch in July in Year 1 and Year 2

10.1 HEDGE CUTTING:

Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base, using suitable mechanical cutters unless otherwise directed by the CA. Both sides and tops of hedges shall be cut back to previous year's growth. The Contractor is to finish all work to give a neat and tidy appearance over the whole hedge and remove arisings. All cuts shall be cleanly made, without tearing. Remove all grass and weed growth from the base of the hedge together with any litter.

New hedges to be maintained at a height of 1.20m generally in Lidl and Retail Unit car parks. The hedges in the rear of Nursery to be allowed to grow up to 1.80m to provide screening.

11.0 NATIVE BLOCKS

These blocks are to be grown to have a natural woodland understorey or natural woodland effect.

- Ensure that all native plants/whips remain firmly bedded in the ground after strong winds, frost and other disturbances.
- Refirm by treading around the base. Any 'collars' forming at the base of the whip shall be broken up and then backfilled with topsoil.
- Provide aeration where compaction is considered to be one cause for poor whip condition.
- NATIVE BLOCK 3 BARK MULCH Top up bark mulch to 50mm depth for Year 1 and Year 2
- NATIVE BLOCK 1 MAINTAINING SLATE MULCH: During weeding and maintenance operations do not incorporate mulch into the underlying soil. Each Autumn rake over the slate mulch to provide a neat and tidy appearance
- Any native plants/whips which die or are otherwise defective during the 5 year Maintenance Period shall be replaced in the next October and March planting season to maintain a stocking level of 70%.
- NATIVE BLOCK 2 Top up bark mulch to 50mm depth for Year 1 and Year 2 around individual and grass maintenance of understorey.
- Remove spiral guards from native plants at rear of Lidl Store in Year 3.

PRUNING NATIVE PLANTS/WHIPS it is to be undertaken as follows:

- Remove dead or damaged branches and cut back any ragged edges of wounded bark back to healthy tissue. Prune only to encourage bushy growth.. Pruning shall be undertaken once per year during mid/late Spring and be **completed by 15 June and once during October in first two years. Thereafter once per year between October and February.** The use of chainsaws and the like will not be permitted
- In Year 5 thin the block favouring strongest growing best formed plants.

12.0 GRASS AREAS

GENERAL TURF GRASS MANAGEMENT

INSPECTION OF GRASS AREAS AND LITTER PICKING : The Contractor shall inspect grass areas on each occasion before commencing grass cutting operations and shall remove and dispose of all litter, stones and other debris which may cause personal injury, or damage to buildings, machinery or equipment and installations.

COMMENCEMENT OF OPERATIONS : Once grass cutting has commenced on an area, the whole area shall be cut and completed.

GRASS CUTTING MACHINES : Grass cutting machines shall be appropriate for the size of area being maintained and the standards of finish specified. Inaccessible margins, isolated rough areas of any size, corners, bases of fencelines, bases of hedges, Cutters of all mowers shall be sharp, properly set and shall cut the sward evenly and cleanly.

In Native block 2 hand mowing or strimming to be undertaken to avoid damage to plant material.

REMOVAL OF ARISINGS : All arisings from grass cutting scattered over roads, paths and planting beds should be swept up, collected and removed from on the same day mowing is undertaken.

Arisings from Amenity Grass are to be removed after first cut and thereafter dispersed and removed if grass is allowed to grow greater than the specified height and are therefore unsuitable for dispersing.

Arisings from Wildflower Grass Areas to be removed.

OBSTRUCTIONS : All growth around obstructions in grassed areas and grass overhanging edges of planting beds, bases of trees, stone light surrounds, fence lines and the like shall be cut on each occasion that the grass is cut.

GRASS EDGES : Where grass abuts horizontal hard surfaces cut it back to the edge of the hard surface without forming a channel wherever the overgrowth of grass exceeds 100mm, using an appropriate grass edge cutter, cutting to smooth curves and straight lines as appropriate.

REFORMING GRASS EDGES : Additionally for all amenity as shown on the Contract Drawings re-form the edges by half mooning abutting paths, around tree bases, manhole covers, along fence lines and adjacent planting beds with a suitable edging tool to straight lines or smooth curves as appropriate. This type of edging to be carried out once a year and completed by **28 February** unless specified otherwise by the CA.

GRASS CUTTING MACHINES : Damage to plants or other material caused by the use of these machines, including nylon cord cutting machines, for whatever reason will require the Contractor to supply and place suitably approved replacement material all at his/her own expense.

INITIAL GRASS CUT : In addition to the requirements of the Contract to maintain grass to specified heights over the year, the Contractor shall cut all grassed areas in early Spring to remove all overwintering grass. The arisings from this cut shall be removed from all amenity grass areas. This work should be completed by 20th March each year unless otherwise agreed with the CA.

GRASS AREAS AROUND TREES An area of a minimum of 900mm diameter around all trees is to be kept free of weeds and grass in amenity grass areas for first 3 years.

12.1 **AMENITY CONSERVATION GRASS AREA** rear of Nursery Building

MOWING : The Contractor shall maintain grass heights to the following requirements:

PERIOD ALL YEAR

MAXIMUM HEIGHT not to exceed 50 mm

MINIMUM HEIGHT not to be less than 20mm

The grass shall be cut to produce an even, regular and free from ribbing. **Arisings shall be removed after first cut.** The Contractor will obtain approval from the CA for the type of mowers to be used prior to commencing mowing operations.

WILDFLOWER GRASS AREAS :

Wildflower grass area by side of Nursery

All grass, weeds, isolated brambles and the like shall be cut. The finish shall be even, regular and free from wheel marks.

This item shall include for the trimming around all trees and other obstructions at the same time. The Contractor will obtain approval from the CA for the type of mowers to be used prior to commencing mowing operations.

Wildflower grass area by Native Block 2

All grass, weeds, isolated brambles and the like shall be cut. Using a hand mower or strimming carefully to avoid damage to plants.

MINIMUM HEIGHT not to be less than

Year 1

Mow frequently to control
flush of weed growth in

75mm

Year 2-5

March cut height 40-70mm

First cut March

Sept/Oct cut 40mm

Second

Remove arisings

'Hay cut' Sept/Oct

The grass shall be cut to produce an even, regular and free from ribbing. **Arisings shall be removed after first cut.** The Contractor will obtain approval from the CA for the type of mowers to be used prior to commencing mowing operations.

SPOTWEED CONTROL IN WILDFLOWER AREA

'(weeds in Amenity Grass Area controlled by mowing)

Spotweed docks, bramble, thistles, Rosebay willow Herb, Ragwort, Maretail and other noxious weeds.

13.0 **INVASIVE NON NATIVE SPECIES**

In the event that invasive plant species become established on site they will be controlled at the nearest opportunity using approved methodology and guidance (<http://www.nonnativespecies.org>) to avoid the risk of further contamination and spread. Common examples include:

- Treat Knotweed if it reoccurs.
- Cut Himalayan balsam (*Impatiens glandulifera*), by hand or machine below the lowest node to prevent the formation of flowers and seeds.

30Aug 2024

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GENERAL YEARS 1-5

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	LIDL STORE : GLAN LLYN : NEWPORT			13-Aug-24	Rev 29 August 2024 Rev 19 August 2024	
		Native	Pollinator			
KEY	SPECIES			NAME	SIZE	QTY
	All trees to be rootballed for autumn planting/winter planting only All Tree pits to 2000mm x 2000mm square or 1500 x 1500mm square as indicated Oaks to be only UK grown from nursery confirmed free of Oak processionary moth.					
AcE EXH	Acer campestre William Caldwell	N	P	Field Maple	14-16cm girth Extra Heavy Standard	8 No
Ag EXH	Alnus glutinosa	N		Alder	14-16cm girth Extra Heavy Standard	4 No
Bpub EXH	Betula pubescens	N		Downy Birch	14-16cm girth Extra Heavy Standard	9 No
Bp EXH	Betula pendula	N		Silver Birch	14-16cm girth Extra Heavy Standard	3 No
CbL EXH	Carpinus betulus Lucas	N	P	Hornbeam	14-16cm girth Extra Heavy Standard	4 No
Ms EXH	Malus sylvestris	N	P	Crab Apple	14-16cm girth Extra Heavy Standard	4 No
PCC EXH	Pyrus calleryana Chanticleer		P	Type of Pear	14-16cm girth Extra Heavy Standard	3 No
Qr EXH	Quercus robur	N	P	Oak	18-20cm girth Adv Nursery Standard	2 No
Sa EXH	Sorbus aria	N	P	Whitebeam	14-16cm girth Extra Heavy Standard	1 No
Sauc EXH	Sorbus aucuparia	N	P	Rowan	14-16cm girth Extra Heavy Standard	1 No
TcR EXH	Tilia cordata Rancho	N	P	Small leafed lime	14-16cm girth Extra Heavy Standard	1 No
	TOTAL					40 No
	NATIVE BLOCKS			NATIVE 1-3		427 m2
				Plant at 1.00m cts or 1.20m cts		
Bpub	Betula pubescens	N	P	Woolly Birch	60-90cm 1+1	15 No
Cm	Crataegus monogyna	N	P	Hawthorn	60-90cm 1+1	54 No
Ca	Corylus avellana	N	P	Hazel	60-90cm 1+1	35 No
Cs	Cornus sanguinea	N	P	Dogwood	60-90cm 1+1	35 No
la	Ilex aquifolium	N	P	Holly	30-45cm 3Lpot	40 No
Lv	Ligustrum vulgare	N	P	Wild Privet	60-90cm 1+1	30 No
Ms	Malus sylvestris	N	P	Crab Apple	60-90cm 1+1	10 No
Ps	Prunus spinosa	N	P	Blackthorn	60-90cm 1+1	20 No
Rc	Rosa canina	N	P	Dogr Rose	60-90cm 1+1	15 No
Sauc	Sorbus aucuparia	N	P	Rowan	60-90cm 1+1	10 No
Scap	Salix capraea	N	P	Goat Willow	60-90cm 0/1	10 No
Scin	Salix cinerea	N	P	Grey Willow	60-90cm 0/1	10 No
Sv	Salix viminalis	N	P	Crack Willow	60-90cm 0/1	10 No
Sn	Sambucus nigra	N	P	Elder	60-90cm 1+1	5 No
Tb	Taxus baccata	N	P	Yew	30-45cm 3Lpot	5 No
Ue	Ulex europaeus	N	P	Gorse	30-45cm 3Lpot	5 No
Vo	Viburnum opulus	N	P	Guelder Rose	60-90cm 1+1	20 No
HH	Hedera helix Hibernica	N	P	Ivy	60-90cm 2Lpot	40 No
	TOTAL					369 No
	HEDGEROWS 1-20			HEDGE 1-8		236 linm
	DOUBLE ROW as indicated			Double Row	Plant at 0.30m cts	219 linm
	SINGLE ROW as indicated			Single row	Plant at 0.30m cts	17 linm
	CENTRAL FENCE as indicated					160 linm
Ac	Acer campestre	N	P	Field Maple	60-90cm 1+1	267 No
Cb	Carpinus betulus	N		Hornbeam	60-90cm 1+1	242 No
Cm	Crataegus monogyna	N	P	Hawthorn	60-90cm 1+1	267 No
Ca	Corylus avellana	N	P	Hazel	60-90cm 1+1	115 No
Cs	Cornus sanguinea	N	P	Dogwood	60-90cm 1+1	27 No
la	Ilex aquifolium	N	P	Holly	30-45cm 3Lpot	55 No
Vo	Viburnum opulus	N	P	Guelder Rose	60-90cm 1+1	27 No
	NURSERY HEDGES					
Ac	Acer campestre	N	P	Field Maple	60-90cm 1+1	135 No
Cb	Carpinus betulus	N	P	Hornbeam	60-90cm 1+1	135 No
Fs	Fagus sylvatica	N	P	Dogwood	60-90cm 1+1	135 No
	TOTAL					1405 No
	PLANTING BEDS 1-13					648 m2
Hpet	Hydrangea petiolaris		P	Self Clinging Climber	On Frame 90cm + 5L pot	7 No
HGL	Hedera helix Glacier		P	Self Clinging Climber	On Frame 90cm + 5L pot	5 No
HGH	Hedera helix Goldheart		P	Self Clinging Climber	On Frame 90cm + 5L pot	2 No
Ab	Abelia grandiflora		P	Abelia	40-60cm 3Lpot	197 No
As	Asplenium scolopendrium	N		Harts Tongue Fern	2Lpot	78 No
Amel	Amelanchier canadensis		P	Juneberry	45-60cm 3Lpot	No
Bal	Ballota pseudodictamus		P	False Dittany	20-30cm 2Lpot	402 No
CA	Cordylina australis			Cordylina	90cm 10Lpot	15 No
Cv	Calluna vulgaris	N	P	Native Heather Pink	2Lpot	160 No
CC	Cistus corbariensis			Rock Rose	45-60cm 3Lpot	35 No
CAZ	Choisya Aztec Pearl			Mexican Orange	45-60cm 3Lpot	57 No
EK	Erigeron Profusion		P	Mexican Fleabane	2Lpot	28 No
EEG	Euonymus Emerald Gaiety			Dwarf Euonymus	20-30cm 2Lpot	544 No
EH	Euonymus Harlequin			Dwarf Euonymus	20-30cm 2Lpot	142 No
Fg	Festuca glauca Intense Blue			Blue Grass	2Lpot	140 No
Hcal	Hebe caledonia		P	Hebe	20-30cm 2Lpot	235 No
HH	Hedera Hibernica	N	P	Form of large leafed Ivy	60-90cm 2Lpot	190 No
HCS	Hedera Colchica Sulphur Heart					
IJCT	Ilex JC Van Tol		P	Form of Holly	30-45cm 3Lpot	85 No
Pset	Polypodium setiferum	N		Evergreem Fern	2Lpot	75 No
POL	Prunus Otto Luyken			Dwarf Laurel	45-60cm 2Lpot	45 No
Sc	Santolina chamaecyparissus			Lavender Cotton	30-45cm 3Lpot	225 No
VEP	Viburnum tinus Gwenllian		P	Viburnum	45-60cm 3Lpot	230 No
VmBV	Vinca minor Bowles Variety			Periwinkle	20-30cm 2Lpot	135 No
	TOTAL					3032 No

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