

**CUNNANE STRATTON REYNOLDS**  
**LAND PLANNING & DESIGN**

RESIDENTIAL DEVELOPMENT AT  
ARDCLOUGH RD. CELBRIDGE  
LANDSCAPE DESIGN REPORT

April 2022

For: Kildare County Council

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Landscape Masterplan	21612-2-101
Boundary Treatment Plan	21612-2-111
Services Overlay	21612-2-112
GA Plans	21612-2-401
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Figure 1: Local Site Context



The proposed site is located in Celbridge, in northeast County Kildare. The site is located to the south of the river Liffey, bounded to the east by back gardens of the residential units along Ardcloough Road. To the west, north and south of the site are green field sites, currently in agricultural use as pasture.





LEGEND

- SITE BOUNDRY
- PUBLIC OPEN SPACE
- PRIVATE SPACE
- HOUSING AREA
- PLAY AREA
- MAIN ROAD
- PRIMARY PATH
- SITE ENTRANCE

The proposed residential development is divided into three main areas:

- a) Arrival space adjacent to Ardclough Road
- b) residential area focused around a central Green.
- c) A small public green space on the western edge of the site with playground for children bicycle parking, shrubs, trees, and amenity grass.

Figure 2: Landscape Concept





The existing road from the west facilitates the access to the site. The primary road proposed, connects the residential zones and is delineated by pedestrian footpaths, parking and green open spaces. Each unit has its own private garden.

Figure 3: Movement and Spatial Hierarchy Diagram





**LEGEND**

**Proposed Parkland Trees**

**Large Trees**  
 (Ag) *Alnus glutinosa* 14-16cm, 3-4m ht  
 (Op) *Quercus petraea* 14-16cm, 4.25-6m ht  
 (Ap) *Acer platanoides* 14-16cm, 4.25-6m ht

**Small - Medium Trees**  
 (La) *Liquidambar styraciflua* 10-12cm, 3-4m ht  
 (SaL) *Sorbus aria 'Lutescens'* 14-16cm, 3-4m ht

Underplanted with selected bulbs - Narcissus and Hyacinthoides non-scripta

**Proposed Street Trees**

**Large Trees**  
 (AcE) *Acer campestre 'Elaeagnifolia'* 16-18cm gth, 4-6m ht  
 (TcG) *Tilia cordata 'Greenspire'* 16-18cm, 5-6m ht

**Small - Medium Trees**  
 (Bp) *Betula pendula* 14-16cm, 3-4m ht  
 (Sa) *Sorbus aucuparia* 12-14cm, 2.5-3.5m ht

**Native Hedgerows**  
 (indicative planting list)  
*Sambucus nigra*  
*Prunus spinosa*  
*Viburnum opulus*

**Proposed Native Shrubs & Perennials Planting**  
 (indicative planting list)  
*Comus sanguinea*  
*Cytisus scoparius*  
*Frangula alnus*  
 Underplanted with native bulbs - Narcissus and Hyacinthoides non-scripta

**Proposed Shrubs Planting MIX 1**  
 (indicative planting list)  
**Medium height ornamental shrub mix at 3/m2**  
*Comus sanguinea* 60-90cm br. - 10%  
*Corylus avellana* 60-90cm, br. - 5%  
*Cytisus 'Alf Coat'* 45-60cm, 3L pot - 5%  
*Lonicera pileata* 45-60cm, 3L pot - 10%  
*Rosa 'Rhapsody Blue/Tanakastrua'* - 10%

**Proposed Shrubs & Perennials Planting MIX 2**  
 (indicative planting list)  
**Low height ornamental shrubs/plants**  
 -max. ht. 40-150cm, 2L min. pot size and planted at 4/m2

*Ajuga reptans* var. *Amstelvelen'* Specimen: *Amelanchier Canadensis* 90-120cm  
*Berberis 'Amstelvelen'* *Miscanthus* spp. *Cotinus coccinea* (90-120cm)  
*Picea abies procumbens* *Potentilla* spp. *Rhus typhina* (90-120cm)  
*Spirea japonica 'Firelight'*

**Proposed Hedges**  
 Hedges planted in single species lengths of hedge varied randomly across site. 60-90cm at 3/lin.m

*Fagus sylvatica*  
*Ligustrum vulgare*  
*Buxus sempervirens*

**Herbaceous planting**  
 (indicative list)  
 Birdsfoot Trefoil, Black Meddock, Devil's Bit Scabious, Corn Marigold, Corn Poppy, Corncockle, Cornflower, Cowslip, Eyebright, Fleabane, Kidney Vetch, Lady's Bedstraw, Lesser Knapweed, Marjoram, Scented Mayweed, Rough Hawkbit, Selfheal, Sorrel, St. Johnswort, White Campan, Wild Carrot, White Clover, Yarrow, Yellow Rattle.

**Ornamental grasses:**  
*Briza media*\*, *Carex flacca*\*, *Stipa barbata*, *Carex oshimensis*, *Penisetum alopecuroides*

**Perennials:**  
*Knautia macedonica*, *Foeniculum vulgare*, *Achillea millefolium*\*, *Eryngium giganteum*, *Inula helenium*;

**Amenity Grass**

**Public footpath**  
 Concrete footpath with concrete edging

**Permeable parking bays**  
 PCC Pavers 120x160x80mm  
 Natural, Silver or Charcoal Finish to complement street facades and reinforce character areas. Alternate colours for details and highlights. N.B. Permeable paving to private areas only.

**Paving Type 1**  
 - Selected PCC Pavers/slabs  
 To private threshold paved areas

**Paving Type 2**  
 - Selected PCC Pavers/slabs  
 To semi-private threshold paved areas

**Play Surface/Safety Surface**  
 Reinforced grass

**Seating**  
 Metal and stone seat

**Play trail**  
 (Willow teepees, willow tunnels, logs, boulders)

**Fencing**

Figure 4: Landscape Masterplan



Play Park



Key Plan

The Play Park is located to the north-west corner of the site. It contains a curving footpath that crosses the space to create a space for natural play and an open grass space for active recreation.

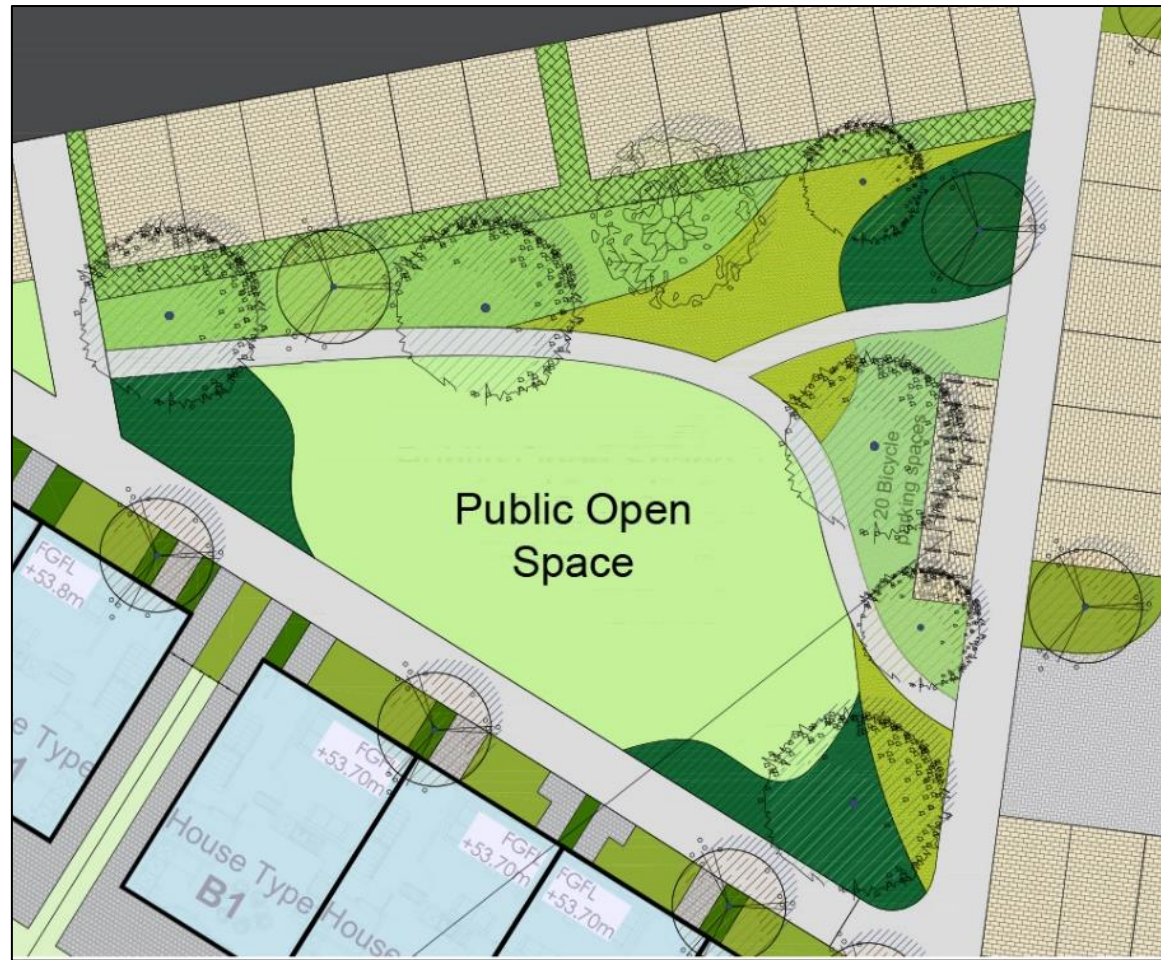
The natural play area is located to the edge of this open space and is surrounded by large trees and naturalistic ground cover planting with a native hedgerow demarcating the site boundary. Tree trunks and boulders will be placed to allow for informal social interaction and natural play and exploration. The area will be constructed from natural materials and integrated between landscape features. Cycle parking and car parking will be located at the edge of the space, set within planting and trees to provide a softening effect of the streetscape.



Figure 5: Play Park







The Central Green is at the heart of the new neighbourhood and located centrally within the site overlooked on all its edges. The main feature of the space is the naturalistic planting and trees that are used to define the space, creating an open grass area at its centre for activities that meet the social, physical and psychological needs of residents. The planting will be ground cover perennials, which will be at a low level beneath the trees, and will allow for open views across the space while also creating a softening of the streets.



Key Plan



Figure 6: Central Green







Key Plan



The Arrival Space is located to the north-east corner of the site and will play an important role in the sense of arrival to the neighbourhood. The main characteristic of this space will be the naturalistic planting and trees which offers a green and welcoming arrival into the site





Green Streets





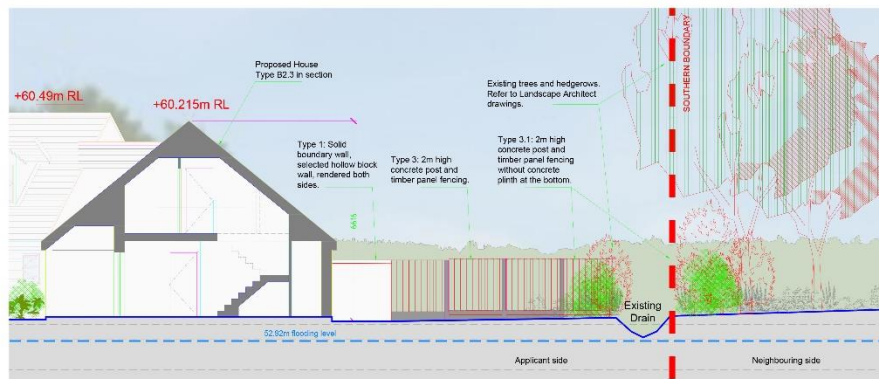
CONTEXT ELEVATION - SECTION A-A  
(Scale 1:200)



KEY PLAN  
(Not to scale)



CONTEXT ELEVATION - SECTION B-B  
(Scale 1:200)



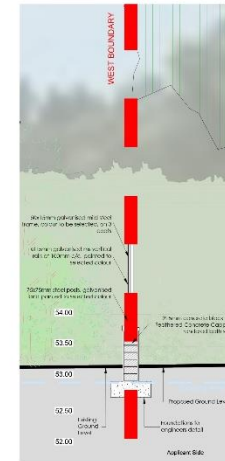
BOUNDARY WALL DETAIL B1  
(Scale 1:100)

NOTE:  
Sections by VHA





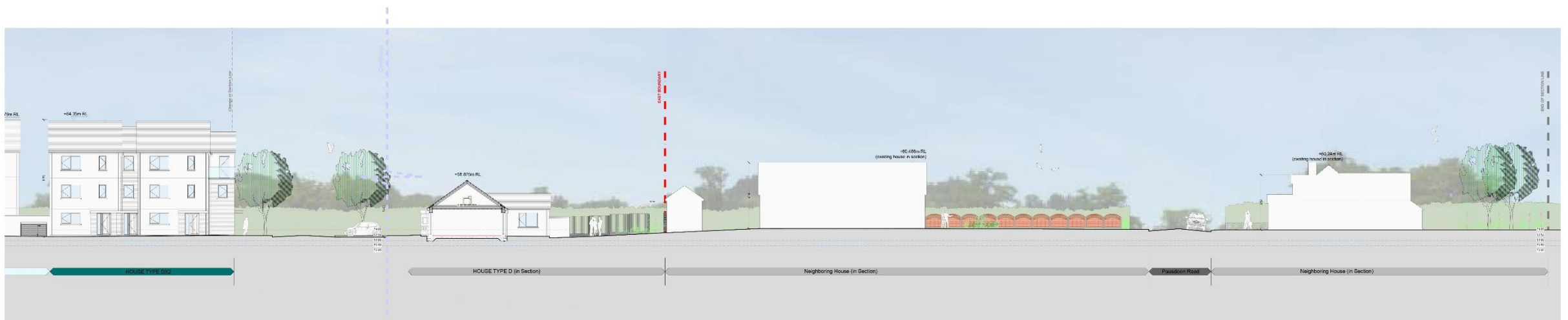
CONTEXT ELEVATION - SECTION C-C  
(Scale 1:200)



FENCE DETAIL C1  
(Scale 1:50)



KEY PLAN  
(Not to scale)












CONTEXT ELEVATION - SECTION C-C (continued)  
(Scale 1:200)

NOTE:  
Section by VHA





LEGEND:

-  Boundary Type 1 - 2 m high mesh fence
-  Boundary Type 2 - 2 m high proposed blockwork wall
-  Boundary Type 3 - 2 m high existing blockwork to be retained
-  Boundary Type 4 - 1 m high proposed low stone wall
-  Boundary Type 5 - 2 m high concrete post and timber panel fencing withouth concrete plinth at the bottom
-  Boundary Type 6 - 1 m high fencing
-  Boundary Type 7 - 2 m high concrete post and timber panel fencing
-  Boundary Type 8 - existing tree groups + hedgerows to be retained
-  Boundary Type 9 - proposed native hedgerows

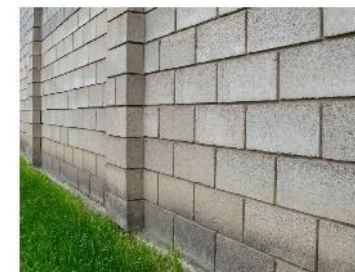
1. LOW STONE WALL AND RAILINGS - 1M HIGH



3. MESH FENCE - 2M HIGH



2. BLOCKWORK WALL - 2M HIGH



4. METAL POST AND RAIL FENCE 1,2M HIGH





Local Park/Green Trees:



*Alnus glutinosa*



*Cer platanoides*



*Liquidambar styraciflua*

Proposed Street Trees:



*Acer campestre*



*Betula pendula*

Native Hedgerows



*Sambucus nigra*



*Viburnum opulus*

Shrub Planting ( Medium height):



*Cornus sanguinea*



*Corylus avellana*



*Cytisus "All Gold"*



*Lonicera pileata*

Shrub Planting ( Low height):



*Spirea japonica "Firelight"*



*Ajuga reptans va*



*Picea abies procubens*



*Miscantus spp.*

-Specimen



*Cotinus coggygria*



*Rhus typhina*

Hedges



*Ligustrum vulgare*



*Buxus sempervirens*

Ornamental grasses



*Briza media*



*Stipa barbata*

Perennials



*Knautia macedonica*



*Eryngium giganteum*



*Pennisetum alopecuroides*





Block paving/Private paths



Pavers/Slabs - Back gardens



Block paving/Parking bays



Concrete Footpath



Play Surface/ Reinforced Grass



Seating - Standard bench  
timber & steel

NOTE:  
All materials will be designed to a high standard,  
be robust and withstand a long life,  
as well as meet the CE standard.



**INTRODUCTION**

This document sets out the proposed maintenance and management plans for the establishment and ongoing maintenance of the landscape element of the proposed development. There will be a minimum 18 months defects period on all soft landscape works implemented. Thereafter the landscaping will be maintained in perpetuity consecutive 12 months periods.

**1.0 SOFT LANDSCAPE WORKS SPECIFICATIONS**

**1.1 Site Clearance Generally**

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 25mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life. In accordance with current Health and safety legislation.
- Vegetation: remove all weed growth.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

**1.2 Weed Control**

Remove all noxious and undesirable weeds from the site. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

**1.3 Standards**

In preparing the landscaping, supplying plants and maintaining the landscaping the following standards are to be adhere to:

- BS 3882                      Specification for topsoil and requirements for use
- BS 3936-1 to 10            Specification for the supply of nursery stock
- NPS                            National Plant Specification
- BS 3998                      Tree Works: Recommendations
- BS 4428                      Code of Practice for general Landscape Operations
- BS 5837                      Tree in relation to Construction
- BS 7370-1 to 5             Grounds Maintenance
- BS 8545                      Trees: from nursery to independence in the landscape-recommendations
- BS 8601                      Specification for subsoil and required use
- BS EN 1722-9              Fences Specification for mild steel - low carbon steel - fences with round or square verticals and flat horizontals
- RoSPA                        Standards for safety for play and exercise equipment.

The latest publications for each document are to be used.

**1.4 Soil Conditions**

- Soil for cultivating and planting: Moist, friable and do not plant if waterlogged.
- Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

**1.5 Climatic Conditions**

- General: Carry out the work while soil and weather conditions are suitable.
- Strong winds: Do not plant.

**1.6 Times of year for planting**

- Deciduous trees and shrubs: Late October to early March.
- Evergreens/Conifers: October/November or Feb/ March.
- Container Grown plants: Any time of years.

**1.7 Mechanical Tools**

Restrictions: Do not use within 100mm of tree and plant stems.

**1.8 Watering**

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

**1.9 Preparation, Planting and Mulching Materials**

General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

**1.10 Plants/ Trees - General**

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
- Species: True to name.

**1.11 Container Grown Plants/ Trees**

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.



**1.12 Labelling And Information**

General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:

- Full botanical name.
- Total number.
- Number of bundles.
- Part bundles.
- Supplier's name.
- Employer's name and project reference.
- Plant specification, in accordance with scheduled National Plant Specification categories and BS 3936.

**1.13 Plant/ Tree Substitution**

Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering. Submit alternatives, stating the price and difference from specified plants/ trees. Obtain approval before making any substitution.

**1.14 Plant Handling, Storage Transport and Planting**

- Standard: To HTA 'Handling and Establishing Landscape Plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Planting: Upright or well balanced with best side to front.

**1.15 Treatment of Tree Wounds**

Cutting: Keep wounds as small as possible.

- Cut cleanly back to sound wood using sharp, clean tools.
- Leave branch collars. Do not cut flush with stem or trunk.
- Set cuts so that water will not collect on cut area.
- Fungicide/ Sealant: Do not apply unless instructed.

**1.16 Protection of Existing Grass**

- General: Protect areas affected by planting operations using boards/ tarpaulins.
- Excavated or imported material: Do not place directly on grass.

Duration: Minimum period.

**1.17 Surplus Material**

Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, pruning's and other arising's: Remove.

**1.18 General Planting/Seeding**

- Planting shall be carried out within the contract period but not during periods of frost, drought, cold drying winds or when the soil is waterlogged, or when the moisture of the soil exceeds field capacity.
- All containers and protective coverings including biodegradable coverings to root systems shall be removed prior to planting. Roots, except for emergent vegetation, shall be teased out from the root-ball, spread evenly and not twisted.
- All plant material shall be planted upright or placed so as to be well-balanced. Extreme care

is to be taken to avoid damage to the root system, stem and branches when planting. The plant shall be positioned such that after planting the original soil mark on the stem is at finished ground level.

- Following completion of planting, grass seeding and turf laying, the soil over the whole of the planted, seeded or turfed area shall be sufficiently watered to achieve its field capacity.
- On completion of planting, watering and mulching, all areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.
- For shrub and transplant pit planting, notch planting and ordinary planting, the plant positions shall be set at equal centres in order to obtain a natural dense cover when mature. For notch and pit planting plants shall be planted in parallel lines. Planting positions in each row shall be staggered with the previous row.
- Finely-broken backfill material shall be carefully spread around roots and root trainers of all plants and the plants given slight shake to ensure that all interstices/ gaps are filled with soil, which shall then be consolidated by heeling. Careful filling and heeling shall continue as necessary at 150mm layers.

**1.18.1 Mulching**

Newly planted shrub areas shall be mulched immediately after planting to a depth of 50mm or in accordance with the details indicated on the drawing. Mulch shall be coarse chipped tree bark, composted for 2-4 months. Particle size 25-75mm diameter. No Fines.

**1.18.2 After Planting & Mulching**

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- All areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.

**1.19 Tree Planting**

Attached in the appendix are typical tree planting details for this site.

**1.19.1 Tree Pits**

- Sizes: at least 300mm greater than rootball in all directions.
- Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Pit bottoms: With slightly raised centre. Break up to a depth of 100mm.
- Pit sides: Scarify.

**1.19.2 Semi-Mature Trees**

- Standard: Prepare roots and transplant to BS 8545.
- Planting shall be carried out by positioning the tree in the centre of the pit closely against the tree stake and spreading the tree roots to their fullest extent.
- Backfilling material: Previously prepared mixture of topsoil excavated from pit and additional compost as required.
- Immediately following planting, trees with stakes shall be secured with tree ties. Tree ties shall be fixed so that movement of the tree shall not cause damage or abrasion to the bark, top tie to be 50mm below top stake.



**1.19.3 Staking Generally**

Softwood, peeled chestnut, larch or pine, straight, free from projections and large or edge knots and with pointed lower end. Adjustable rubber ties to be fixed to all trees and at the correct size for the tree.

**1.19.4 Mulch Circles/Squares**

All existing trees/newly planted trees within open grass areas or grass verges shall have 50mm depth mulch circle/square of a maximum 1m diameter or as allowed by verge width.

**1.20 Shrub Planting**

- All shrubs are to be pit planted. General pit dimensions are to be wide enough to accommodate roots when fully spread and 75mm deeper than root system.
- Break up base of pit to a depth of 150 mm, incorporating soil ameliorant/ conditioner at 50 g/m<sup>2</sup>.
- Pits to be backfilled with previously excavated material. Backfilling to be done in layers of 150mm depth; at each stage the filling to be firmly consolidated.
- Soil ameliorants can be premixed with the soil applied or mixed in during planting.
- Soil ameliorants to consist of an approved compost at 10L per m<sup>2</sup>; and 150g/m<sup>2</sup> of 10:10:10 NPK slow release fertilizer, or as approved.
- All shrub areas to be finished, with 75mm of medium grade bark mulch.

**1.21 Hedgerow Planting**

- Preparation: Dig trench to 500mm width for single staggered row, ensuing pit base is broken up 100mm deeper than plant rootball.
- Ameliorants: Compost at 10lt/m<sup>2</sup> and 10:10:10 NPK slow release fertiliser at 150g/m<sup>2</sup>.
- Planting: Mix in soil ameliorants with excavated topsoil, or if there is poor topsoil then mix in with imported new topsoil. Firm down topsoil lightly in layers of 150mm by treading.
- Additional Requirements: If there is no existing fencing or barrier, install a protective fence to stop people walking through it until hedge is established. If there is livestock adjoining hedge install a stockproof fence or electrical fence 1m from hedge line until hedge is established.
- Prior to new growth cut the hedge back by 300mm to encourage new growth from base.

**1.23 Removing Trees and Shrubs**

- Identification: Clearly mark trees and hedges to be removed.
- Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.

**1.24 Failures of Planting**

- Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
  - Exclusions: Theft or malicious damage after completion.
  - Rectification: Replace with equivalent plants/ trees/ shrubs.
- Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- Defects Period: 5 years.

**1.25 Green Roofs**

Due care is to be taken when planting in gardens to ensure no damage occurs to the waterproof membranes. All planting is to be laid over a green-roof system that complies with European Federation of Green Roof Associations, ( EFB), or equivalent, and in accordance with the drawings provided.

**1.26 Grass Seeding****1.26.1 Herbicide Application**

- Type: Suitable for suppressing perennial weeds and existing grass.
- Timing: Allow fallow period before cultivation.
- Duration: As manufacturer's recommendation

**1.26.2 Seedbed cleaning before sowing**

Operations: Kill pernicious weeds with selective contact herbicide.

**1.26.3 Cultivation**

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer are to be used to boost late seeding only. Type to be used is to be agreed with the administering body depending on the time of year and the condition of the soil.
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
  - Depth: 75 mm.
  - Particle size (maximum): 20 mm.
- Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

**1.26.4 Topsoiling**

- Areas to be reinstated shall be top-soiled to a min. depth of 150mm.
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- General: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
  - Corrosive, explosive or flammable;
  - Hazardous to human or animal life;
  - Detrimental to healthy plant growth.

**1.26.5 Grading**

- General appearance to be achieved: A fine graded finish to bring the ground to a uniform and even grade at the correct finished levels with smooth, flowing contours.
- Topsoil condition: Reasonably dry and workable.
- 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.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.
- Give notice: If required levels cannot be achieved by movement of existing soil.



**1.26.6 Fertilizer for Seeded Areas**

- Types: Apply both:
  - Superphosphate with a minimum of 18% water-soluble phosphoric acid.
  - A sulphate of ammonia with a minimum of 20% nitrogen.
- Application: Before final cultivation and three to five days before seeding/turfing.
- Coverage: Spread evenly, each type at 70 g/m<sup>2</sup>, in transverse directions.

**1.26.7 Final Cultivation**

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
- Depth: 50-100mm.
- Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Remove surface stones/earth clods exceeding:
  - Pastoral areas: 50mm.
  - Fine lawn areas: 10mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

**1.26.8 Grass Seed**

- All seeds shall carry appropriate certificates.
- Seed shall be purchased fresh for each growing season and seed purchased impervious sowing seasons is not to be used.
- Seed shall be stored under non-transparent wrapping, off the ground, in a dry, shaded place, in well ventilated conditions under cover and shall be protected from vermin and contamination until required for use.
- No seeding shall take place until the seedbed is completed. All seeding shall be carried out within the sowing season.

**1.26.9 Sowing**

- General: Establish good seed contact with the root zone.
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
- Distribution: 2 equal sowings at right angles to each other.
- Protection: fence off areas with suitable fencing to stop people or animals from trampling new growth.

**1.26.10 Grass sowing season**

Grass seed generally: April to June or August to November.

**1.27 Cleanliness**

After completion of all works remove all debris and waste material from site.

- Soil and arisings: Remove from hard surfaces and grassed areas.
- General: Leave the works in a clean tidy condition at completion and after any maintenance operations.



## 2.0 MAINTENANCE

The maintenance programme will be organised on the basis of specific **performance standards** which must be met by the contractor at all times and will be the basis on which this contract will be assessed. Along with these performance standards a monthly report sheet shall be filled out and returned each month. Details of the performance standards are outlined below.

Remove all noxious and undesirable weeds from the sit. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

### Performance Standards and Maintenance Operations

#### 2.1 Grassed Areas

##### 2.1.1 Fine-Cut Grass Areas

Fine cut grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. No more than 5% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

##### *Fine-Cut Mowing*

Where practical fine grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. All grass clippings shall be collected and removed off-site after each cut.

Lawn grass cutting shall be carried out every two weeks during the growing season, (throughout the period of March to October), but will need to be adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 50mm and minimum height of 35mm. A minimum of 16 cuts shall be carried out annually.

##### *Weed Control*

Lawn grass areas shall be treated using an approved selective herbicide according to manufacturer's instructions. Areas of invasive and noxious species in the lawn or areas, shall be spot sprayed.

##### *Fertilizer*

Approved fertilizer shall be applied once per year to fine lawn areas if required due to poor grass growth / establishment or yellowing. Spring fertilizer application of NPK ratio 9:7:7 shall be applied in May of each year OR Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

##### 2.1.2 Amenity Grass Areas

Amenity grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. Unless otherwise agreed with the landscape architect no more than 20% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

##### *Amenity Grass Mowing*

Where practical grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. Unless excessive or unsightly, or likely to cause a nuisance or damage to the sward, arisings shall be spread evenly over sward areas collected.

Lawn grass cutting shall be carried out every 14-20 days during the growing season, (throughout the period of March to October), adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 75mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

##### *Weed Control*

Weed infestations shall be reviewed in the context of the aesthetic and amenity functioning of the grass and if necessary controlled by spot spraying.

##### *Fertilizer*

Not required.

##### 2.1.3 Semi-Natural Grassland/ Meadows

Areas identified as semi-natural grassland or meadow are to be left uncut throughout summer and cut or flailed to c.50mm height once per year during autumn. All arisings are to be collected and removed from meadow areas and composted elsewhere on site.

Species identified as invasive shall be removed by spot spraying or by hand. Fertilizers and soil improvers shall not be applied.

##### 2.1.4 Edging and Strimming

Grass edges along pathways, planting borders, roadways, trees, lampposts, signs and any other obstacle shall be kept neat and tidy at all times.

Between the months of March and October inclusive edging shall be carried out to all areas of grass abutting isolated/ specimen trees or shrub borders or mulch circles. These areas shall be maintained using a half moon tool or similar to maintain straight or curved defined line and shall be carried out a minimum of 2 - 3 times per year.

Mowing strips against permanent obstacles shall be a max. width of 150mm and shall be maintained using a hand strimmer. Large areas of desiccated/ burnt off grass are not permitted. Strimming shall be carried out a min. of 12 times per year. Grass clipping and all arisings shall be swept up and removed off site.



**2.1.5 Spring Bulbs in Grassed Areas**

Only cut grassed areas populated by spring bulbs after the leaves of the bulbs have died down and/or yellowed completely. Initially reduce height by one third, followed by a 2-3 stage further reduction over two weeks to achieve desired grass height.

**2.1.6 Failed areas**

Areas of grass which fail or are damaged or worn shall be reinstated by re-turfing or re-seeding in accordance with the original specification.

**2.2 Shrub Planting**

Shrub areas shall be kept litter and weed free, particularly of perennial weeds. Healthy growth shall be maintained to cover as much as possible of the planting area and allowing the individual plants to achieve as near as possible their natural form. With the exception of hedges, boxing or pruning to shapes is prohibited. Plants shall be contained with designed planting areas and pruned to avoid obstructing pathways or sightlines. Climbers are to be pruned and tied into trellises as required, with two main inspections annually to check trellis system is intact and anchor points are secure.

**2.3 Pruning**

In general pruning shall be done only to enhance natural growth. Dead, damaged and diseased portions of the plant will be removed. All cuts shall be flush and clean, leaving no stubs or tearing of bark. All major pruning shall be done following flowering or during plant's dormant season. Emergency or minor pruning shall be done when needed.

Pruning shall be carried out to maintain proper size in relationship to adjacent plantings and intended function. Remedial attention and repair to shrubs shall be provided as appropriate by season or in response to incidental damage.

Groundcover plants shall be pruned as required to restrain perimeter growth to within planting bed areas where adjacent to walks and curbs. Tip prune selected branches of low growing shrub or groundcover masses to maintain even overall heights and promote fullness.

Certain plants, such as Cornus spp. will require heavy annual pruning in order to maintain healthy colourful stems and healthy leaves. All arising's from pruning shall be removed of site.

**2.4 Weed Control**

Ornamental planting beds shall be maintained relatively weed free (no more than 10% of weed cover at maximum) by hand weeding or spot spraying any emergent weeds during the growing season with Glyphosate or approved equivalent. Saplings shall be removed from all planting areas on emergence or immediately after to prevent establishment.

Specific weed control operations shall be carried out a min of 9no. times per year, however it will be the contractor's duty to control weeds by hand weeding or other if weed cover exceeds 10% of the planting area.

**2.5 Mulching**

Shrub beds shall contain a min. depth of 50mm bark mulch throughout the year. Contractor to top-up as 2 times per year or as appropriate to maintain depth. Mulch is not required in areas where plant foliage completely covers the soil surface, such that the soil is not visible through the foliage. The contractor shall spot treat to remove emergent weeds as specified above but do not cultivate or incorporate the mulch into the soil. Any mulch outside of designated planting areas shall be returned to the planter on a weekly basis.

Mulch shall be uniform in colour and appearance, and free of leaves, sticks, or trash. Mulch may be chipped or shredded wood, bark. When replacing existing mulch, use a mulch product that is similar in appearance to that already at the site.

**2.6 Tree Planting Care**

Trees shall be maintained in a healthy, vigorous growing condition with a well-shaped framework for future growth.

**2.7 New Tree Planting**

Spring and autumn of each year during the maintenance period the trees, double-stakes, rabbit guards and ties shall be checked and adjusted, the soil firmed, any dead wood removed back to healthy tissue and mulch adjusted to original levels. Any broken stakes or ties evident throughout the maintenance period shall be replaced.

A 1m-diameter mulch circle/square shall be maintained at the base of each tree located in open grass areas or grass verges. Top up bark mulch to 75mm where required and make good any mulch mats.

During the first growing season all standard trees / semi-mature trees shall be watered at least five times during the growing season - in April, May, June, July and August unless otherwise directed by the Landscape Architect. During the second growing season trees will be kept well watered, particularly during June, July and August.

The edge of the mulch circle shall be maintained in a neat and tidy condition as above.

The surface of all planting pits is to be kept free of weeds during the maintenance period by hand weeding of annual weeds, and spot application of translocated herbicide, (as per manufacturer's instructions), for perennial weeds to be carried out on three visits during the growing season.

**2.9. Tree Stakes and Ties**

Check tree stakes and ties on each maintenance visit. Repair, strengthen and adjust (loosen / tighten) to ensure optimum functioning and trees not being damaged by poor fixings. If trees no longer require stake / tie remove. Prior to handover, check all tree stakes and ties and remove those no longer required.



**2.8 Woodland/Scrub Area Management**

Woodland areas specified shall be maintained in a healthy, vigorous condition and free from litter and noxious weeds throughout the year.

Certain areas of woodland may require thinning over the 5-year period. These areas shall be thinned by no more than 10%, removing only the weaker tree specimens. Thinning shall be carried out as directed on site by the administrative authority or landscape architect/manager. Areas of semi-natural scrub as indicated on the maintenance plans shall be contained by trimming back once per year.

All thinning and clearance operations within woodland and scrub areas shall be carried out in autumn, outside of the bird-nesting season to preserve the bird life in the area. This season extends from the 1<sup>st</sup> March to 31<sup>st</sup> August.

**2.09 Litter Clearance/Pick-up**

The contractor shall maintain all areas free from litter. This shall mean the removal of all extraneous litter, rubbish and any other debris from all areas, which will include grass areas, planted areas, carparks, footpaths as well as woodlands and tree canopies.

Notwithstanding the above it is expected that the contractor and his staff shall take sufficient pride in the appearance of the site and that they would pick up all visible litter during every site visit.

In addition to removal of litter from footpaths, planted areas, etc., the contractor shall make provision for the immediate (within 1 days of notification) arrangement for collection and removal of all extraneous matter which has been deliberately deposited on site by persons known or unknown (fly-tipping).

**2.10 Replacements**

Any tree, hedge or shrub that is removed, uprooted, destroyed or becomes seriously damaged, defective, diseased, or dead shall be replaced in the same location with another plant of the same species and size as that originally planted within 5 years after planting. All such replacements shall be carried out in the first available planting season after the requirement to do so is recognised.



**3.0 Maintenance Programme**

This programme is a guideline only and times of operations may vary on approval by landscape architect.

ONGOING REQUIREMENTS:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Lawn grass cutting (Min 24 cuts)				*	*	**	**	**	**	*	*	
Edging to lawn grass areas				*			*			*		
Rough Grass / Meadow							*					
Fertiliser application to lawn areas							*					
Hedge pruning/cutting										*		
Shrubs pruning and feeding							*					
Weed control of hedge and shrub planting areas				*			*			*		
Tree pruning											*	
Removal of tree stakes (3-5yr)				*								
Mulch top-up to tree circles/ squares				*			*			*		
Herbicide app. to tree mulch circles				*			*			*		
Herbicide app./weeding to shrubs & hedgerow							*					
Watering of new trees (or after 3 weeks of no rain)				*	*	*	*	*	*	*		
Trimming of scrub areas											*	
Weed control of scrub areas				*							*	
Application of residual weed killer to footpaths, cycle paths.				*								
Litter Clearance/pick up	**	**	**	**	**	**	**	**	**	**	**	**