4.6 Woodland Gardens

Character Imagery









4.7 Streetscapes

Streetscape Type 1

This is the main local Street within the development linking Enniskerry Road to the GLDR. Typically the road cross section consists of a 6m carriageway with a 2m footpath provided. Car parking arrangements vary along its length, consisting of a range of perpendiculars and parallel parking arrangements. Numerous cross opportunities are provided and raised tables and side entry treatments are provided at certain locations to facilitate pedestrian movement and lower vehicle speeds.











4.7 Streetscapes Streetscape Type 2

There are numerous home zones (with shared surface treatment) located with the masterplan lands. Home zones are located in low traffic low speed locations where pedestrians, cyclist and vehicle share the street. Typically the cross section consists of a 4.5m to 4.8m shared surface with a 1.2m to 1.5m pedestrian comfort zone. A variety of car parking arrangements are provided on home zones street. In the image below a single line of perpendicular car parking broken up with landscaping is shown.





Streetscape 4 Plan



Location Plan

Streetscape 5 Plan

4.7 Streetscapes Streetscape Type 3

There are a large number of local streets located within the masterplan lands. Typically they provide connections from external road network to residential zones within the development. These street types would typically carry higher volumes of vehicular traffic than homezone streets, although volumes are still low. Typically local streets have a cross section of 5.5m carriageway and 2m footpaths provided on either side. A variety of car parking arrangements are proposed including in-curtilage and on-street arrangements in perpendicular and parallel arrangements.









4.7 Streetscapes Streetscape Type 4

There are numerous home zones located with the masterplan lands. Home zones are located in low traffic low speed locations where pedestrians, cyclist and vehicle shared the street. shared surface treatment. Typically the cross section consists of a 4.5m to 4.8m shared surface with a 1.2m to 1.5m pedestrian comfort zone. These examples are short sections of residential areas located in cul-de-sacs streets.





Streetscape 9 Plan



Location Plan



Streetscape 16 Plan

4.7 Streetscapes

Authorship of this image by 3D Design Bureau



Landscape Plans and schedules included in the application, prepared by NMP Landscape Architects includes a detailed schedule of proposed planting and illustrates the location and extent of mown grass, managed long grass, reinforced grass, low ground cover, hedge and tree planting as well as existing trees to be retained where applicable.

Tree species are selected for longevity, suitability to local soil conditions and microclimate, biodiversity (native species) and where required suitability for proximity to residential buildings. Proposed tree sizes range from heavy standards and multistemmed trees to native whip and forestry transplants. There will be a net gain of individual trees in order to improve the species mix and the proportion of native species on site. Typical species are illustrated on the following pages.

Low planting is utilized to make and reinforce sub-spaces within the larger landscape spaces, for visual screening, defensible space, visual interest, ecological purposes and to guide or direct people's movement. The low planting is conceived as subtle layering of greens within the open spaces. The planting is layered as follows; lowest - bulb planting, ground cover planting, highest - clipped hedge planting.

The selection of hard landscape materials is determined by function but also to provide a cohesive palette of materials throughout. Materials are chosen for durability, but where practical are proposed to be constructed in a way which is sensitively integrated with lawn and soft landscape, in order to minimise the impact of hard landscape surfaces. Primary vehicular, pedestrian and cycle circulation are proposed as a durable, limited range of neutral materials with robust construction.

LANDSCAPE O. PALETTES O

SURFACE FINISHES

The hard materials palettes have been selected to represent and respond to use and character of specific spaces. They will be durable and of high quality with patterning developed in the latter stages to indicate moments and celebrate thresholds. High Quality Permeable Paving



To Public Spaces

High Quality Permeable Paving



To Public Spaces

Fractured Paving



To Public Spaces

Block Paving



To Driveways / Street





To Driveways / Street

Block Paving





To Driveways / Street



Steping Stones



To Public Spaces

Fractured Paving



To Public Spaces

Permeable Paving



Car Parking



Car Parking

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To Paths on Avenues

Brushed Concrete



To Paths on Avenues

Self Binding Gravel





To Public Area's

Self Binding Gravel



To Cycle Tracks



To Woodland Paths



To Woodland Paths

Exposed Concrete Aggregate



To Public Area's

Colored Asphalt



To Homezones

Black Top Asphalt



To play + fitness zone



To Roads

FURNITURE

Bins, bollards and seating have been selected as appropriate to the design language and surroundings within which they fit. These for the most part, will be off the shelf products and specified accordingly. Picnic Table



To Woodland

Bins



To Pedestrian Areas

Log Benches



To Public Area's

Wooden Benches



To Road Edges



To Pedestrian Areas



To Public Area's



Natural Stone Benches



To Public Area's

Natural Stone Benches

Wooden Benches



To Public Area's



To Public Area's

Wooden Benches



To Public Area's

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Boundery

Natural Stone Wall



To Public Area's

Bollards

Little Library / Book Swap



To Public Area's

Natural Play



Bespoke Imaginative





To Road Edges



To Road Edges



Bike Stand



To Bike Parking

Insect Hotel



Habitat Opportunities



Exercise



To fitness areas



Habitat Opportunities

5.2 Indicative Soft Landscape Material Approach

WOODLAND TREE PLANTING

Informed by the existing and formative tree planting and a native palette the tree planting will bleed into the site and grade out from north to south.

Carpinus betulus

Fagus sylvatica





Quercus robur





Prunus serrulata

STREET TREES + SMALL FEATURE **TREES + PODIUM TREES PLANTING**

Specimen tree planting will provide year long interest and beauty - landmarks in the landscape, to celebrate and identify with.



Liquidambar







Gleditsia triacanthos



Centaurea cyanus



Polygonatum multi-



WILDFLOWER & SHRUB PLANTING

To enhance bio-diverse credentials wildflower planting will occupy edges and large swathes of the sites periphery along with shade tolerant understory planting including plant selection to encourage foraging.

WOODLAND UNDERSTORY & SHADE LOVING PLANTING

Woodland areas and shaded gardens will be planted with mix of shade loving plants.











Lotus corniculatus



Helleborus x ericsmithii



Polystitchum aculeatum Dryopteris wallichiana





Viburnum davidii







Pyrus callerayana



Sorbus aucuparia



Crataegus monogyna



Malus sylvestris



Arbetus unedo

Magnolia grandiflora





Acer campestre

Tilia cordata



Ranunculus acris



Medicago lupulina



Rhinanthus minor



Lavandula x intermedia









Convallaria majalis



Pachysandra terminalis



APPENDIX O

Response to LRD Opinion 6.1

Please see full collated response prepared by Thornton O'Connor Town Planning enclosed separately.

Comment: 4. Open Space and Landscaping: Further details is required in relation to the proposed public open spaces to adequately ascertain the quality of the amenity to be provided. In this regard detailed, plans, long sections identifying levels; a full schedule of hard and soft landscaping elements; and public lighting details should be provided.

Response: Further details regarding the proposed public open spaces have been provided to the drawing pack, detailed plans and long sections identifying levels. More descriptive details about open spaces and their quality can be found in section 4 of this document. A full schedule of hard and soft landscaping elements, that are part of this report have also been added to the drawing pack. Additionally, the locations of the light posts have been indicated on the plan, with further details available in the public lighting pack.

Comment: 7. A quantitative and qualitative assessment which provides a breakdown of the communal and public open space. The assessment shall detail the functionality of the public space and shall disregard any areas required for circulation space such as footpaths between buildings etc.

Response: This requirement has been addressed. A quantitative and qualitative assessment has been provided in the initial section of this document, in the "Overview Approach". Adicional diagrams referring to open areas (both POS and COS) and circulation can be found in section 3 and further details on the use of space can be found in section 4 of this document. The assessment thoroughly examines the functionality of the public spaces and excludes any areas required for circulation. The main porposed POS with respective breackdown areas are:

- The Village Green Square (2722 m²)
- The Dingle Way (2000 m²)
- Woodland Corridor (5874 m^2 + 2081 m^2)
- Woodland Gardens $(1772 \text{ m}^2 + 2379 \text{ m}^2 + 974 \text{ m}^2)$
- Woodland Walk (2270 m^2 + 1892 m^2 + 978 m^2)
- Enniskerry Road (Civil space with pocket parks, outside the POS quantum)

Comment: 12vii. An assessment of Landscape proposals and associated biodiversity enhancement measures.

Response: An assessment of the landscape proposals and associated biodiversity enhancement measures has been included in section 3 of this report (mainly in 3.6 and 3.7). Trees have been proposed to be planted to compensate for those removed, and additional positive actions have been taken, such as the creation of wildflower meadows, the installation of bird and bat boxes, and the enhancement of existing hedgerows to support local wildlife. Please refer to ecologist report for further detail.

Comment: 12f. Landscape Proposals

The ecologist will liaise with the landscape architect in respect of planting and ensure that opportunities for appropriate biodiversity enhancement measures are provided, including:

Response: Indications and locations for biodiversity enhancement measures can be found in the diagram in section 3.6 of this report.

i. All landscaping proposals will avoid the placement of pathways or cycleways next to treelines, hedgerows or proposed wildlife/biodiversity areas Response: For the most part pedestrian routes are proposed to utilise exisitng movement corridors such as the central tree belt previously used for farm machinery, and tie in with wider connections strategies as indicated by DLRCC such as the Dingle way. It is not foreseen that proposed routes through the landscape will conflict with existing or proposed habitats and the gain will be for both the future community and preservation and enhancement of the existing natural landscape.

ii. Provision of sufficient space for biodiversity enhancements, including a buffer area for biodiversity wildlife corridors which will not be lit and will not have any pedestrian or cycle path in close proximity.

Response: Where relevant set backs away from existing habitats have been provided or sensitively integrated.

iii. Planting suitable native species of trees, shrubs and herbs. Species of Irish provenance should be used wherever possible;

Response: The proposed plant schedule responds to a pre-dominant native and resiliant mix, and can be developed further with relevant bodies as part of the future design stages.

iv. Supporting native pollinators.

Response: The scheme supports native pollinators due to pre-dominant native and resiliant mix, and can be developed further with relevant bodies as part of the future design stages.

v. The provision and placement of bat boxes, bird nest boxes, invertebrate enhancement measures.

Response: Provision of bat boxes, bird nest boxes and invertebrate enhancement measures have been considered and provide along the open spaces.

corridors.

Comment: 12g. Tree Assessment and Plan i.It is noted that section 3.5 of the submitted Landscape Design Statement refers to the Tree Plan and trees to be retained or removed. It also refers to ABP's reason refusal for the previous SHD application in respect of trees to be removed. However, it appears that no arboricultural assessment or tree per se plan has been included with the submitted documentation. ii. This omission will need to be rectified at the final LRD stage. Response: The application includes a tree suvery, arboricultural imapct assessment and tree protection details which include a report, tree constraints drawing, tree retention/removal drawing and tree protection drawing.

according to the proposed planting schedule.

proposed development.

Response: Play and recreational opportunities for children and teenagers, suitable for the development's scale and character have been proposed. Diverse play areas for different age groups, incorporating formal, informal, and natural play elements, have been planned. These locations are indicated on the site plan and in the hard landscape schedule. An extra digram was added to the drawing pack containing indicative sizes and locations of each play area. An approximate diagram can also be seen in the initial section of this document in "Overview Approach" and informalities in the use of open space envisaged in the digram of section 4.1. Safe and durable play equipment has been porposed alongside multi-use games areas, fostering physical activity and social interaction. Green spaces have also been integrated, promoting informal play and recreation, all designed with safety and accessibility in mind.

Comment: 14e. Detailed Play Proposals shall be submitted in the form of a Proposed Play Rationale and Layout Plan (separate to, but related to the Landscape Masterplan), using Nature-based Solutions, informed by the 'genus loci' of the site (e.g. existing and planned landform, character etc.), to provide informal, impromptu and spontaneous play opportunities, along with structure, equipped play, as appropriate; for agreement with Dlr Parks+Landscape Services. Response: The play proposals, including a Proposed Play Rationale and Layout Plan, have been developed, separate and with, the Landscape Masterplan. These proposals incorporate nature-based solutions, considering the site's characteristics to provide diverse play opportunities. While the locations and general details are indicated on the site plan.

Comment: 14f. The Layout Plan shall comprise the following: i.showing types of play and play area(s), target age groups, landform (included levels and contours) and boundaries, gates and planting, ii.design and construction details of play opportunities and facilities in respect of landform, planting, boundaries, equipment and safety surface. iii. All play equipment and ancillaries shall conform to European Standards EN 1176-1-11 and EN 1177 Playground equipment and surfacing, and to BS/ EN standards 2017/18 for Playground Installations for HIC (Head Injury Criterion) and CFH (Critical Fall Height). Surfacing should comply with the manufacturer's specifications. Response: As per previous answer, the play locations are indicated on the site plan and in the hard landscape schedule. An extra digram was added to the drawing pack containing indicative sizes and locations of each play area. An approximate diagram can also be seen in the initial section of this document in "Overview Approach" and informalities in the use of open space envisaged in the digram of section 4.1. In addition construction details of playing element options have been added to the details section of the drawing pack. All the play areas conform to European Atandards as well as those of the manufacturer's specifications.

vi. Connections to the wider landscape and consideration of the DLR Ecological Network where relevant.

Response: Please refer to design strategies in section 3 of this document, with indicate approach to planting and demonstrate links to existing green

Comment: 14c. Sustainable tree planting is important in development sites. The dlr Tree Strategy 2024 - 2030 will be published within the next couple of months and a policy 10 of this strategy will encourage new and replacement planting of trees on development sites and recommend that new plantings attempt to achieve a target of 18% canopy cover along with government and council canopy cover targets. A strong emphasis on native species given the location of this development which is a more rural area at the foot of the Dublin mountains.

Response: New and replacement planting of trees have been proposed to support both government and council targets. Additional positive actions taken include prioritising native species, enhancing biodiversity through the creation of wildlife corridors and buffer zones, proposing measures to support local wildlife such as the installation of bird and bat boxes, establishing wildflower meadows, supporting native pollinators, and ensuring sustainable and thoughtful placement of trees to contribute to long-term ecological health and landscape connectivity. The target of 18% canopy cover will be achieved

Comment: 14d. The applicant shall provide play and recreation opportunities for children and teenagers, as appropriate to the scale and character of

Appendix 1 - Soft Landscape Outline Specification

1. Specifications for supply.

1.0 Schedule of supply:

The nursery stock material will be delivered following consultation between the Landscape Architect, landscape contractor and the selected nursery, and the Engineer. Delivery will be at all times by means of covered vehicles, and all plant material will be clearly labeled. The source of origin must be from the selected nursery as no other additional stock from other nurseries will be permitted without prior inspection and approval.

1.1 Programme of Works

The planting works shall be executed at the earliest opportunity.

1.2 Nurserv stock:

All plant material shall be good quality nursery stock, free from fungal, bacterial or viral infection, aphids, red spider or other insect pests and any physical damage. It shall comply with the requirements of B.S. 3936: Parts 1-10: 1965 Specification for Nursery Stock, where applicable.

All plants shall have been nursery grown in accordance with good practice and shall be supplied through the normal channels of the wholesale nursery trade. They shall have the habit of growth that is normal for the species. Country of origin must be shown in all cases for species grown from seed.

Unless otherwise stated, the plant materials shall be supplied in accordance with the following codes where stated

- 1+0 1 Year old seedling
- 1+1 1 Year old seedling lined out for 1 year
- 1+2 1 Year old seedling lined out for 2 years
- 1+1+1 1 Year old seedling lined out for 1 year, lifted and lined out for one further year
- 1...1 1 Year old seedling undercut then 1 more year in seedbed.
- 1 Year old seedling undercut then 2 more years in seedbed. 1u2
- 0/1 1 Year old Hardwood cutting
- 0/2 2 Year old Hardwood cutting
- 2X Twice transplanted tree
- 3X Three times transplanted tree
- 4X Four times transplanted tree
- P9 Containerised plant in 9cm pot

1.3 Species:

All plants supplied shall be exactly true to name as shown in the plant schedules. Unless stipulated, varieties with variegated and/or coloured leaves will not be accepted, and any plant found to be of this type upon leafing out shall be replaced by the contractor at his/her own expense. Bundles of plants shall be marked in conformity with B.S. 3936: Part 1: 1965 and B.S. 3936: part 4: 1966. The nursery supplier shall replace any plants which, on leafing out, are found not to conform to the labels. Definitions of all terms used are in accordance with the following British Standards: -

B.S. No. 3936: Part 1: 1965 entitled "Nursery Stock- Trees and Shrubs"

B.S. No. 3936: Part 4: 1966 entitled "Nursery Stock- Forest Trees"

B.S. No. 3936: 1967 entitled "Specification for Nursery Stock"

2.0 Tree specifications:

Trees shall have a sturdy, reasonably straight stem, and a well-defined straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown and root systems shall be well formed. Roots shall be in reasonable balance with the crown and shall be conductive to successful transplantation.

2.1 Standard trees shall have a clear stem 1.70m in height from ground level to the lowest branch, a minimum girth of 8cm measured at 1.00m above ground level and a total height of 2.75-3.00 m.

2.2 Light Standard trees have a clear stem 1.30m in height from ground level to the lowest branch, a minimum girth of 6cm measured at 1.00m above ground level and a total height of 1.80-2.40m.

2.3 Select standard trees shall have a clear stem 1.70 m in height from ground level to the lowest branch, a minimum girth of 10 cm. measured at 1.00.m. above ground level and a total height of 3.0 to 3.5 metres.

2.4 Heavy standard trees shall have a clear stem 1.80-1.90m in height from ground level to the lowest branch, a minimum girth of 14 cm. measured at 1.00.m. above ground level and a total height of 4.0 to 4.5 metres. All trees shall have been undercut a minimum of three times.

2.5 Extra Heavy standard trees shall have a clear stem 2.0m in height from ground level to the lowest branch, a minimum girth of 16 cm, measured at 1.00.m. above ground level and a total height of 4.5 to 5 metres. All trees shall have been undercut a minimum of three times.

2.6 Semi-mature trees shall have a clear stem 2.0m in height from ground level to the lowest branch, a minimum girth, as specified in the Bill of Quantities, measured at 1.00.m. above ground level and a total height of min. 5 metres. All trees shall have been undercut a minimum of three times.

All standards shall be clearly labeled.

2.7 Feathered Trees 180-240cm to conserve moisture.

2.8 Feathered Transplants 120-150cm to conserve moisture.

2.9 Feathered Transplants 90-120 cms, 60-90 cm, 40-60 cm, 30-40 cm Transplants shall be not less than one year old. Trees of species not listed in B.S. 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules. Trees shall be well furnished with lateral fibrous roots, and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting to conserve moisture.

2.10 Shrubs

(1) Containerised Shrubs shall be of the size specified in the schedules, with several stems originating from or near ground level and of reasonable bushiness, healthy, vigorous and with a sound root system. Pots or containers shall be appropriate to the size of shrub supplied and clearly labeled. Shrubs shall not be pot bound or with girdled or restricted roots.

(2) Bare Root Shrubs shall be of size specified in the schedules, with several stems originating from or near ground level, with reasonable bushiness, healthy, and vigorous. They shall be well furnished with fibrous roots and shall be lifted without severence of major roots. All bare root shrubs shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting to conserve moisture.

2.11 Container Grown Conifers: Conifers shall be of the size specified in the schedules, with one main stem originating from or near ground level and of reasonable bushiness and health, with a well-grown, root system. Pots or containers, where required, shall be appropriate to the size of plant supplied and clearly labeled. Plants shall not be pot bound, or with deformed or restricted roots.

Feathered trees shall be not less than four years old, and shall have been transplanted at least three times. Trees of species not listed in BS 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules.

Trees shall be well furnished with lateral fibrous roots, and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting

Transplants shall be not less than two years old, and shall have been transplanted at least once. Trees of species not listed in B.S. 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules.

Trees shall be well furnished with lateral fibrous roots, and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting

Appendix 1 - Soft Landscape Outline Specification

2.12 Protection:

The interval between the lifting of stock at the nursery and planting on site is to be kept to an absolute minimum. Plants shall be protected from drying out and from damage in transport. All stock awaiting transport shall be protected from the wind and frost and from drying out. Protection shall include for the supply of stock to site to a suitable heeling-in/ storage area prior to planting. The landscape contractor shall allow for liaison with the site engineer to arrange the heeling-in area/ storage. The contractor shall continue to be entirely responsible for the maintenance of this stock to ensure that at the time of planting the stock complies with the requirements for the supply of nursery stock as per clause 1.0 thereof. No responsibility for the maintenance of the stock will attach to the site engineer whilst the stock is protected on site. No time limit shall attach to the period of protection.

In the event of the Landscape Architect being dissatisfied with the care and attention given to the stocks, following heeling-in, he shall notify the Landscape Contractor who shall take steps to ensure careful heeling-in procedures.

The preparation of the heeling-in area and its subsequent maintenance is the sole responsibility of the Landscape Contractor.

2.13 Damage

On completion of lifting of plants in the nursery, any broken shoots or severed roots shall be pruned, areas of damaged bark neatly pared back to sound tissue.

2.14 Inspections

The Landscape Architect will inspect the hardy nursery stock on the selected nursery during the execution of the works. Only plants selected and approved in the landscape contractors selected nursery will be accepted on the site.

2.15 Delivery and heeling in

All plants will be delivered on a phased basis as called up in advance in agreement with the Engineer, Landscape Architect and the appointed Landscape Contractor. In the event of the Landscape Architect being dissatisfied with the care and attention given to the stocks, following heeling-in, he shall notify the Landscape Contractor who shall take steps to ensure careful heeling-in procedures.

The preparation of the heeling-in area and its subsequent maintenance is the sole responsibility of the Landscape Contractor.

3.0 Specifications for site operations:

3.1 Setting out:

Setting out shall be in accordance with site meetings with the Landscape Architect, and the drawings listed in the preliminaries. No planting works shall take place when the soil /fill is in a waterlogged condition.

3.2 Finished grading:

All planting pits and topsoiled areas disturbed by the landscape contractor shall be left in an even state, with all soil clumps broken up and stones of greater than 50mm diameter shall be removed.

4.0 Specifications for Planting and Plant Materials

4.1.1 Stakes:

Round stakes shall be of peeled larch, pine or Douglas fir, preserved with a water-borne copper chrome arsenic composition in accordance with I.S. 131. For standard and select standards stakes shall be 1.8m long, 75mm in diameter. Stake all whips and transplants greater than 120cm in height. For all transplants exceeding 120cm height stakes shall be 1.2m long, 37mm x 37mm square. Stakes shall be pointed at the butt end. Set stakes vertically in the pit, to the western side of the tree station, and drive before planting. Drive stake with a wooden maul or cast-iron headed drive. Stakes shall be driven into the excavated planting pit to a depth of:

800mm for Standards/Light Standards/Feathered Trees 1000mm for Heavy Standards 500mm for Whips/Transplants

4.1.2 Canes:

Bamboo canes or similar approved shall be used to provide spot spraying location markers for small plants including Pinus, species. The canes are not to be attached to the plants.

4.2 Tree ties:

For standard and select standards, tree ties shall be of rubber, PVC or proprietary fabric laminate composition and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie. Ties shall be min. 25mm wide for 120cms height trees and min. 38mm for larger sizes. They shall be fitted with a simple collar spacer to prevent chafing. Two ties per tree shall be applied to standards; for staked transplants, one tie per tree is required. Ties shall be nailed to the stake with one galvanised nail.

4.3 Protection:

from drying out.

All transplants shall be wrapped in polythene from the time of lifting to conserve moisture. Except when heeled-in, they shall be protected in polythene at all times until planted into their final position on site.

4.4 Damage:

4.5 Watering / Alginure / Fertilisers: All bare rooted light standards and select standards shall be soaked in water overnight, on site, before planting in a liquid solution containing "Alginure" at the recommended dilution rate. Fertilisers shall conform to BS 5581: 1981. In the case of granular fertiliser being added to plantings, it must be mixed through and incorporated into the base of the planting hole and covered over in order to avoid roots of plants coming in direct contact.

4.6 Setting out:

shall be planted in groups, as indicated in the planting drawings.

remove all stones and debris, firming plant into position

4.7.1.Select Standards

Excavate tree pits to 800mm x 800mm x 600mm deep, or as approved. The base of the pit shall be broken up to a depth of 80mm and glazed sides roughened. F.Y.M. at the rate of 0.047 cu.m. (equivalent to 60mm deep) and 100gms of 0.10.20 shall be applied to each tree pit prior to planting. Farm manure shall consist predominantly of fecal matter and shall be free of loose, dry straw and undigested hay. It shall be free of surplus liquid effluent. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.7.2 Heavy and Extra Heavy Standards Excavate tree pits to 1000mm x 1000mm x 800mm deep, or as approved. The base of the pit shall be broken up to a depth of 100mm and glazed sides roughened. F.Y.M. at the rate of 0.047 cu.m. (equivalent to 60mm deep) and 100gms of 0.10.20 shall be applied to each tree pit prior to planting. Farm manure shall consist predominantly of fecal matter and shall be free of loose, dry straw and undigested hay. It shall be free of surplus liquid effluent. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.7.2 Semi-mature trees

Excavate tree pits to 1200mm x 1200mm x 1000mm deep, or as approved. The base of the pit shall be broken up to a depth of 200mm and glazed sides roughened. F.Y.M. at the rate of 0.047 cu.m. (equivalent to 60mm deep) and 100gms of 0.10.20 shall be applied to each tree pit prior to planting. Farm manure shall consist predominantly of fecal matter and shall be free of loose, dry straw and undigested hay. It shall be free of surplus liquid effluent. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.7.3.Light Standard Trees Excavate tree pits to 500mmx500mmx500xx deep, or as approved. The base of the pit shall be broken up to a depth of 80mm and glazed sides roughened. F.Y.M. at the rate of 0.047 cu.m. (equivalent to 60mm deep) and 100gms of 0.10.20 shall be applied to each tree pit prior to planting. Farm manure shall consist predominantly of fecal matter and shall be free of loose, dry straw and undigested hay. It shall be free of surplus liquid effluent. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

The interval between the lifting of stock at the heeling-in area and planting on site is to be kept to an absolute minimum. Plants shall be protected from drying out and from damage in transport. All stock awaiting planting on site shall be stored in a sheltered place protected from the wind and frost and

On completion of planting any broken branches shall be pruned, areas of damaged bark neatly pared back to sound tissue.

Setting out shall be in accordance with site meetings with the Landscape Architect. Transplants in mixtures shall be planted in staggered rows. Species

No planting shall take place until all planting holes (with ameliorants) have been inspected and approved by the Landscape Architect, or a person appointed by him as a representative, to ensure accordance with the specifications. No planting shall take place when ground conditions are frozen or waterlogged. All planting holes shall be opened and closed on the same day.

Be planted in the centre of the planting pit and planted upright. Stones or other rubbish over 75mm shall be removed. Supply and drive the stake 800mm into the ground for standards, 500mm for other transplants. Backfill planting hole 4.7 Tree planting:

Trees shall be planted at the same depth as in the nursery, indicated by the soil mark on the stem of the tree. They shall with excavated topsoil, and

Appendix 1 - Soft Landscape Outline Specification

4.8 Feathered Trees 180-240cm. container grown conifers (>2I)

Excavate tree pits to 400mm x400mm x 400 mm deep, or as approved (slit or notch planting are not acceptable planting methods). The base of the pit shall be broken up to a depth of 80mm and glazed sides roughened. Trees shall be planted at the same depth as in the nursery and backfilled with compound fertiliser 0.10.20 at the rate of 50gm per tree and 0.020m3 of Mushroom Compost or similar approved. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.9 Feathered Whips 120-150 cm:

Excavate tree pit to depth of 300mm x 300mm x 300mm deep, or as approved (slit or notch planting are not acceptable planting methods). Excavation to be achieved by machine digging or auguring methods, approved by the Landscape Architect. The base to be broken up to a depth of 60mm and glazed sides roughened. Whips to be planted at same size as in the nursery. Apply 60gm 0.10.20 and 0.020m3 of Mushroom Compost or similar approved. Per tree pit to plants. Stakes 1.2m high x 37mm diam. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.10 Feathered Whips and Transplants 90-120cm, 60-90 cm, 40-60cm, 30-40cm, container grown conifers (<2l size) and container grown shrubs (<2l size):

Excavate planting hole to a depth of 300mm x 300mm x 300mm deep; the base to be broken to a depth of 50mm and glazed sides roughened (slit or notch planting are not acceptable planting methods). Excavation to be achieved by machine digging or auguring methods, approved by the Landscape Architect. Apply 30gm 0.10.20 per planting pit. Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.11 C. G. Shrubs / C. G. Wall Shrubs / C.G. Climbers:

Excavate planting hole to a depth of 300mm x 300mm x 300mm deep; the base to be broken to a depth of 50mm and glazed sides roughened. The following products are to be supplied and incorporated in to the bottom 100mm of topsoil at the base of the planting pit and in to the topsoil for backfilling around each plant: (1)Seanure soilbuilder as supplied by Farmura @ 1.5Kg per cu.m of topsoil, (2) clean and friable green waste compost @ 25 Kg per cu.m of topsoil and (3) Sierrablen Flora 15:9:9 slow release fertiliser @ 70 grams per m2 Backfill planting hole with excavated topsoil, and remove all stones and debris, firming plant into position.

4.12 Grassing

All grass areas to be ripped with a tractor mounted tine prior to rotovating. The contractor shall grade off all areas to smooth flowing contours, removing all stones greater than 10mm diameter and tip off site. All hollows to be filled in. Roll all areas with a roller as approved. Following the completion of final grading and raking, the area is to be left fallow for a period of 14 days. Spray with 'Basta' at recommended rates, and seed with fine grass mix at a rate of 35gr/Sq.m together with fertilizer 10:10:20 at a rate of 50gr/Sq.m use Coburns Irish premier low maintenance mixture or other as approved by the Landscape Architect.

4.12.1 Grass cutting

Grass cutting shall be carried out during the three year maintenance period and is defined into three categories:

4.12.2 Regular grass cutting

Shall be carried out to the frequencies indicated in the Bill of Quantities. Attention to neat and tidy cutting shall be required to all areas. Sightlines, as set out with the Engineer, at junctions and roundabouts must be kept clear of vegetation at all times.

GENERAL

Upon completion of planting, all pits shall be raked over lightly to leave an even surface and neat appearance. All stones greater than 50mm dia, to be removed. Provision should be made for the watering of light and select standards during periods of prolonged drought in the first year following planting.

4.13 Inspections:

The Landscape Architect will inspect the site with the Landscape Contractor during the execution of the works and following maintenance visits.

4.14 Presentation of certificates:

The Landscape Contractor shall present for the Landscape Architect's inspection, all seed and fertiliser bags, together with their markings. If requested, the contractor shall furnish the Landscape Architect with receipts of purchase for these respective materials.

4.15 Spraying:

1) Following planting of embankments, slopes etc., weed free circles to be formed around individual plants, as directed, using an approved broad-spectrum contact herbicide, as approved by the landscape architect, in mid-spring following planting. Herbicide to be applied using controlled drop applicator containing a dye to indicate areas sprayed. In areas where grass is excessively long, such grass will be strimmed off and collected prior to spraying. The contractor shall be responsible for keeping the ground (1m diameter circle) around all planted material weed free by means of herbicidal application, using approved sprays, during the course of the contract. Weeds to be removed include grasses, broad-leaved annual and perennial weeds and all noxious weeds.

2) Selective spot spraying will be carried out to all grassed areas, whether planted or unplanted through the application of contact herbicide to control broad-leaved annual and perennial weeds, including thistle, dock and ragwort. Contact herbicide to be approved by the landscape architect prior to application. Herbicide to be applied using controlled drop applicator containing a dye to indicate areas sprayed. The contractor shall allow for the removal of gorse by cutting, as required prior to spraving to ensure its eradication from all grassed areas for the duration of the contract.

3) The boundary hedgerows shall be kept weed free by herbicidal application by forming a 300mm wide spayed strip along the full length of each respective hedgerow. Approved herbicide (broad-spectrum contact herbicide) to be applied using controlled drop applicator containing a dye to indicate areas sprayed. Spraying of planted areas on roundabouts is also included in this spraying application.

4) Such routine spraying (1, 2 and 3 above) shall be carried out during maintenance visits over the three-year period. No spraying shall take place during adverse weather conditions or at times not recommended by the manufacturer.

4.16 Cutting back: for plants suffering from wind damage.

4.17 Mulching

bark shall measure 30 mm.

4.18 Ground finish: for planting purposes.

Plants for cutting back/tip pruning shall be cut back after inspection by the Landscape Architect. This work to be carried out initially following planting

Mulching may be considered as an optional factor that may be implemented. Mulch shall be from coniferous trees. It shall be shredded, but not pulverised, so that no dimension exceeds 75mm. Bark shall have been composted for a min, of 3mths. In the case of areas requiring mulch the depth of

Upon completion of planting, all ground finish shall include for the removal of stones greater than 50mm excavated during the course of the digging

Appendix 2 - Hard Landscape Outline Specification

PAVING & KERBS

FOOTPATHS

General: Public footpaths, roadways, kerbs etc. shall be constructed in accordance with the requirements of the Roads Maintenance Dun Laoghaire Rathdown County Council.

Accuracy of Levels and Alignment: The levels of paths and paving shall be carefully set out and frequently checked. All care shall be taken to ensure that the correct cross sections are maintained. The finished face of paths shall be formed so as to provide adequate fall and satisfactory run off to surface water outlets, gullies, etc. Cross-falls of paths shall be carried without break across verges and kerbs to prevent ponding of water between back of kerb and path.

Sub-Base: Granular material shall comply with Clause 804 of the D.o.E. Specification for Roadwork's and shall be spread uniformly over the formation and compacted by vibrator roller. Rolling shall continue until there is no movement under the roller. The finished surface of the compacted sub-base shall be parallel to the proposed finished surface of the footpath. The surface levels for each layer shall not deviate from the design levels by more than +15mm or -15mm.

For sub-base thickness in paved areas see area engineers spec, and attached following schedule. Each contractor shall do all necessary tests to ensure a well compacted, plain even surface on all areas with traffic movement. If paving shows settling after 1 year which normally is related to an insufficient depth and compaction of the sub-base the contractor shall rebuilt the failed area to his own cost.

Use of Surfaces by Construction Traffic:

Constructional traffic used on pavements under construction shall be suitable in relation to the courses it traverses so that damage is not caused to the sub-grade. Where damage is caused to the formation of the sub- grade in strength or level the damaged area shall be excavated for an area and depth which shall be determined by the Architect and this area shall be filled to the required levels with crushed rock of 50mm maximum size. The degree of compaction for this area shall be the same as that specified for the remainder of the formation. All this excavation and making good of damaged areas shall be carried out at the expense of the Contractor. Where damage is caused to the sub-base, the damaged area shall be made good as noted above, using the material of which the sub-base is composed. The wheels or tracks of plant moving over the various pavement courses shall be kept free from deleterious materials.

MODULAR PAVING

Concrete Pavers Precast concrete pavers shall conform to the requirements of BS 6717 Part 1. Ensure that sub-bases are suitably accurate and to specified gradients before being laid.

Sample: Before placing orders submit representative samples for approval. Ensure that delivered materials match sample.

Laying Generally:

1. Laying Specification

1.1 Paving blocks/bricks shall be laid to the requirements of Part 3: 1997, BS 7533, except that the lip onto gully gratings is modified to 5 - 6 mm. Note, in particular, the following requirements of Part 3.

i. The difference in level between two adjacent blocks shall not exceed 2 mm.

- ii. The finished pavement surface shall not deviate more than 10 mm under a 3m straight edge.
- iii. The accuracy of cutting a block should be such that the resulting joint should not exceed 5 mm.
- iv. The surface course should be between
- (a) 3 6 mm above drainage channels

(b) 5 - 10 mm above gullies (*BRL modify this to 5 - 7 mm above gullies to reduce "trips")

v. The surface course should be inspected soon after completion and at regular intervals thereafter - additional sand should be brushed in where necessary

1.2 The surface course for chamfered units should be 3 - 5 mm above the kerb to facilitate surface drainage. The surface course for non-chamfered units should be 2 mm above the kerb to facilitate surface drainage.

1.3 When paving units need to be trimmed, pieces with a dimension less than 50 mm should not be used.

2. Drainage Channels

tween 10 mm and 40 mm. Vertical joints should be filled with 3:1 wet sand-cement mix. 2.2 Mortar, which has been mixed for over 2 hours, should be discarded. 2.3 The mortar should be laid on a previously prepared concrete base as per construction drawing detail. Select blocks/paviors vertically from at least 3 separate packs in rotation, or as recommended by manufacturer, to avoid colour banding. Lay blocks/paviors on a well graded sand bed and vibrate to produce a thoroughly interlocked paving of even overall appearance with sharp sand filled joints and accurate to line, level and profile. Refill joints once a week three weeks after first fill. Commencing from an edge restraint lay blocks/paviors hand tight with a joint width of 2-3mm for pedestrian use and 3-5 mm for areas with traffic. Maintain an open working face and do not use mechanical force to obtain tight joints. Place blocks/pavers squarely with minimum disturbance to bedding. Supply blocks/paviors to laying face over newly laid paving but stack at least 1 m back from laying face. Do not allow plant to traverse areas of uncompacted paving. Continually check alignment of pavers with string lines as work proceeds to ensure maintenance of accurate bond. Infill at edge restraints as work proceeds. Wherever the type of bond and angle of edging permit, avoid very small infill pieces at edges by breaking bond on the next course in from the edge, using cut blocks/pavers not less than 1/3 full size. Cut stones shall be rectangular or trapezoidal; the smallest point shall be a minimum of 35mm. (May be pavers have to be turned by 90 deg.)Half stones shall be cut at manufacture. Thoroughly compact blocks/pavers with vibrating plate compactor as laying proceeds but after infilling at edges. Apply the same compacting effort over the whole surface. Do not compact within 1 m of the working face. Do not leave uncompacted areas of paving at the end of working periods, except within 1 m of unrestrained edges. Checks paving after compacting first few metres, then at frequent intervals to ensure that surface levels are as specified; if they are not. lift blocks/pavers and relay. Brush sharp sand into joints, revibrate surface and repeat as required to completely fill joints. Make sure that paving is held by a kerb on both sides before vibration to avoid uneven joints. Avoid damaging kerb haunching and adjacent work during vibration. Do not begin vibration until kerbs have matured. The paving pattern will be stretcher bond, make sure that the joints will be in straight line after vibrating. Also ensure joints are off equal width. The block pavement shall have a surface regularity/ flatness tolerance of less than 10 mm under a 3 m straight edge.

Sample: Before placing orders submit representative samples for approval. Ensure that delivered materials match sample.

PRECAST CONCRETE ELAGS Pre-cast Concrete Flags:

- the Landscape Architect.

KERBS

Kerbing General: Kerb radii shall be in accordance with Architects and Engineers drawings. Use radius kerbs for all new kerbs.

Laying Generally: BS 7263-1.

1. Precast concrete kerbs shall be laid to the requirements of BS 7533. Part 6.

- 5. Kerbs shall be backed with concrete as per drawing.
- 6. Radius kerbs shall be used on radii of 12 m or less.

- 9. Open-jointed kerbs should have joints of 2 4 mm wide. Landscape Architect.

2.1 Where paving blocks are used in a channel, they shall be laid on freshly mixed moist 3:1 sand-cement mortar. The mortar should have thickness be-

1. Precast concrete flags shall be laid to the requirements of BS 7533 Part 4.

Note the following selected items from BS 7533. Part 4.

• The difference in level between two adjacent flags should not exceed 3 mm.

• The top surface of the paving units should stand 3 - 6 mm above the drainage channel.

• A 30 - 50 mm (compacted thickness) of the sand laying course is given as suitable (for narrow joints)

2. Flags should be laid with narrow joints (2 - 5 mm). Joints should be filled with dried sand (conforming to table 4 of the code), or as determined by

Natural stone and precast concrete kerbs shall meet the requirements of BS 435 and

2. Units shall be laid on fresh concrete or mortar bed and adjusted to line and level.

3. Concrete for foundations and haunching shall be to BS 5328.

4. Bedding mortar shall be freshly mixed, moist 3:1 sand-cement between 12 and 40 mm thick.

7. Kerbs should not deviate from the required level by more than 6mm.

8. Kerbs should not deviate by more than 3 mm under a 3 m straight edge.

Mortar jointed kerbs should have joints of 7 - 10 mm wide filled completely with 3:1

sand-cement mortar, and finished to give a smooth flush joint or as specified by the

Appendix 3 - Programme For Implementation, Maintenance + Defects Period

5.0 Maintenance:

5.1 Period:

The Contractor shall be responsible for aftercare of the completed works for 1 Year from the date of completion of planting. Subject to satisfactory performance the maintenance contract may be extended for two further periods of 12 months. Maintenance in years 2 and 3 shall be provisional. Maintenance during years 2 and 3 may be assigned directly. This will include grass cutting, weed control of all planted areas, litter clearance and watering of Select Standard trees during dry weather.

5.2 Organisation:

The aftercare programme will be organised as follows:-

(1) Scheduled operations, in whose timing the contractor will be permitted some flexibility and which will be the basis of payment to the Contractor. (2) Performance standards, which the Contractor is required to meet at all times, and on which his performance will be assessed. (3) Critical dates, by which time scheduled operations, shall have been completed, and at which performance will be assessed.

5.3 Performance standards:

Shrub, woodland and hedgerow planting to be maintained in accordance with specifications e.g. spraving, firming, tree tie adjustment. Weeds shall not cover more than 20% of the ground surface within planting areas and the maintained 1m diameter weed free circles at any time, and neither shall they exceed 100mm in height. Weeds shall be treated before they establish.

Within grass areas noxious and competitive weeds shall not be allowed to establish and all perennial weeds shall be spot treated at each maintenance visit, 3 times per year.

5.4 Watering:

The contractor is responsible for the survival of all plants during the maintenance period. Apply water to moisten full depth of root run using proprietary irrigation system. Avoid washing or compaction of the soil surface. The Landscape Contractor is responsible for informing the Landscape Architect if the plants require watering. A minimum of 16 no. waterings year1, 8 no. year 2, 4 no. year 3. Prior notification to the landscape architect and a record of attendance will be requested for each visit. Spot checks will be made to ensure full compliance with this condition.

5.5 PROGRAMME

Year One (After Planting): Period of 12 months from date of practical completion

5.5.1 By end of May (Year One):

Application of herbicide agreed with Landscape Architect to all planting areas. Protect all plants. Hand weed all large weeds too close to nursery stock for safe treatment. Strim long grass prior to spray application. Provision for 1 no. visit for spot weed control application to areas where perennial weeds are apparent in the grass sward. Tip prune, firm plants. Grass cutting. All necessary cultural/husbandry methods to be completed in order to leave the sites in a clean, orderly and tidy manner. Water select standard trees.

Critical date: 30 May (Year One)

5.5.2 By end August (Year One):

Application of herbicide agreed with Landscape Architect to all planting areas. Protect all plants. Hand weed all large weeds too close to nursery stock for safe treatment. Provision for 1 no, visit for spot weed control application to areas where perennial weeds are apparent in the grass sward. All necessary cultural/husbandry methods to be completed in order to leave the sites in a clean, orderly and tidy manner. Grass cutting. All necessary cultural/ husbandry methods to be completed in order to leave the sites in a clean, orderly and tidy manner. Water select standard trees. Critical Date: 30 August (Year One)

5.5.3 October (Year One): Remove dead plants after Landscape Architect's inspection.

5.5.4 November (Year One):

Replacement planting. Tree care shall mean pruning deciduous trees including those of hedgerow form when dormant to promote open frame works. in the crown. Remove all suckers and dead branches, and branches that are encroaching on to footpaths should be cut back to point of branching.

5.5.5 By end December:

Application of herbicide agreed with Landscape Architect to all planting areas. Grass cutting. All necessary cultural/husbandry methods to be completed in order to leave the sites in a clean, orderly and tidy manner. Water extra heavy standard trees, standard trees.

Critical Date: 30 December (Year One).

5.5.6 Year 2

As year 1.

5.5.7 Year 3

As year 1. Hedgerow to be fully pruned at end of season.

5.5.8 Sweeping and Cleaning

Sweeping shall mean sweeping of the footpaths, playing courts, car parks and the schools road network and removal of all grit rubbish moss and leaves, keeping the hard landscaped areas of the site in a neat and tidy manner. Number of sweepings per annum -12no.

5.5.9 Other Maintenance Works

Carry out any other maintenance to ensure the works are kept in a satisfactory state during the defects liability period

5.6 Grass Cutting

Grass cutting shall be deemed to include for: [a] Removal of lodged grass.

as follows-March: 1cut April: 3 cuts Mav: 4 cuts June: 4 cuts July: 4 cuts August: 4 cuts September: 4 cuts October: 4 cuts November - February: 1 cut Total 29 cuts

Fine cutting shall be deemed to include for grass cut to 25mm high evenly over the whole area, with cuttings left evenly spread over the surfaces. Grass not to exceed 50mm between cuts. Other grass areas of which are less high profile are to be cut 16 times a year. These will include the grassed areas around the woodland areas etc.

Areas indicated as wildflower mix shall be cut three times per annum. Cuts shall be carried out at specified times as agreed with landscape architect and recommended by the wildflower seed producer. Remove cuttings after each cut and remove offsite to tip.

by a representative of the council.

At every second grass cut, grass shall be trimmed from around the base of walls and fences, back of footpaths and kerbs, litter bins, sluice valves and hydrant markers, trees, shrubberies poles and public lighting columns etc., and kept in a neat and tidy condition.

The contractor shall apply a broad spectrum weed killer, once a year, mid April, at the recommended application rate, to control weeds in the grassed areas during the growing season. In addition, 1 no. applications of herbicide to kill off clover in the grass areas shall be applied in April in line with approved herbicides under current legislation.

Cleaning shall mean the removal of paper, plastic bags and all other rubbish from grassed areas, roads, car parks, playing courts, shrubbery's, hedging etc. or any part of the school grounds. This operation shall be carried out twice a month.

All dirt and rubbish to be removed off site to a tip to be provided by the Landscape contractor.

Autumn leaves shall be swept on a weekly basis from end of October to mid-November (three weeks). Any additional cleaning and sweeping deemed necessary, during the year, and requested will be paid for at a pro rata basis to the rates for the programmed maintenance schedule.

All grassed areas are to be edged 3 times a year using a machine and are not to be sprayed.

[b] Removal and disposal of grass cuttings from adjoining roads and paving.

[c] Removal and disposal of stones and other obstructions from area of grass to be cut.

high profile grassed areas, eg. central gardens are to be Fine cut. Fine cutting shall mean mowing to 25mm high. This operation is to be carried out in each location shown on the landscape drawings and in locations as directed on site by a representative of the management team. A rough schedule is

Leave cuttings evenly spread. This operation is to be carried out in each location shown on the landscape drawings and in locations as directed on site

Appendix 4 - Trees on boundaryn with Rockville Court

By way of information. It has been requested by a landowner to review the condition of tress following storm damage which form part of the boundary with the adjacent Rockville development.

An assessment was undertaken by the design teams arborist and the trees, as indicated below, were recommend for removal based on condition and safety concerns.

The local authority was informed of the recommendation and have agreed subject to mitigation of tree loss by way of mitigating planting. The drawings below indicate proposed species, sizes and locations. At the time of submitting this report the works are still to progress.







