

REPORT: LANDSCAPE DESIGN REPORT
+ PERFORMANCE STANDARDS

PROJECT: GREENHILLS ROAD NURSING HOME

DATE: February 2022

Report Title	Landscape Design Report and Performance Standards.
Project	Greenhills Road Nursing Home

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1.0 Introduction

The objective of this report is to provide a description of the landscape design rationale for the proposed nursing home development on the Greenhills Road.

The design of the environment surrounding the nursing home is important in the wellbeing and recovery rehabilitation of the residents. The designed landscape needs to provide a continuum of environmental qualities offering amenities from passive engagement with nature to active interaction with people.

Passive engagement provides the residents with an experience of nature. Active engagement provides the residents with horticultural therapy and assists with their physical and mental wellbeing.

The quality of the open space is experienced in terms of nature dimensions, this is defined under the following 8 perceived sensory dimensions (PSD).

Serene, Space, Nature, Rich in Species, Refuge, Culture, Prospect and Social.

The landscape design report corresponds to the following landscape drawings prepared as part of the planning application for Greenhills Road Nursing Home.

2.0 Landscape Proposals

Throughout the design process the existing site conditions have been considered. The 8no. PSD's will be delivered through the provision of a comfortable landscape design, with interest, refuge, and appeal.

The design will provide a comfortable and inspiring landscape for the residents, their visitors, and the wider community. A 'comfortable' design needs to be considered in the environment so that everyone irrespective of their physical and cognitive condition can use and experience the landscape in its entirety. A comfortable and inspiring landscape must contain six environmental qualities. By considering in detail the six environmental qualities these combine to enhance the experience and wellbeing of the residents which are listed below:

- Closeness and ease of access
- Enclosure
- Safety and Security
- Familiarity
- Orientation and wayfinding
- Social Opportunities.

These qualities have been interlaced within the design development of the key characteristic external areas for the scheme which has brought about tangible and quality enhancements for the resident.

Closeness and ease of access

The proposed landscape will be accessible both physically and visually. The ability to see and access the landscape easily, with minimum effort provides the residents with a direct connection to their surrounding environment. The provision of connections to the surrounding environment via visual connection and physical connections provides the residents with the simple pleasures of nature, connecting the residents to comforting familiar environments which are filled with recognisable flora and fauna. The ability to feel, hear, smell, and taste the environment is the gift of nature. An opportunity to experience natural elements is provided to the residents through the design and development of the surrounding environment.

Enclosure

The provision of a landscape which provides the residents with a sense of ownership through a distinction between the landscape of the Nursing Home and the wider environment.

Safety and security

The removal where possible of risk through slips / sliding, no toxic plants or falling ground cover. The provision of accessible smooth pathway surfaces the omission of kerbing and obstacles. The delivery of a soft environment through the provision of planting which delivers soft / warm colours, Green, Lilac, Blue and White. The removal of angular shapes in the pathway delivering a more 'rounded' organic design. Developing clear and defined boundaries between the private rooms and semi-private / public environment, will be delivered through the provision of buffer planting.

Familiarity

The delivery of plants and surfaces which are familiar, helping the residents to feel at home, this aids in their comfort and experience of the landscape. The landscape will be populated with plants which are common to private gardens and may be present in the home gardens of many of the residents.

Orientation and wayfinding

The removal of all dead ends, the provision of a pathway surface which helps with wayfinding. The provision of variety and distinct places along the pathways, offering different experiences and activities to the residents. Develop clear and defined boundaries between the private rooms and semi-private / public environment.

Social opportunities.

Through the provision of comfortable looping pathways which have been reshaped to remove acute angles and the provision of seating at focal points

social interactions can develop with fellow residents and family members within comfortable and familiar surroundings. Thereby providing each resident with a landscape environment into which they can establish a sense of ownership as a private garden, a familiar family environment.

A further key to the success of the proposed landscape is the delivery of year-round interest. The landscape must look good all year round, in doing so providing and maintaining visual interest for all residents all year round, as well as enhancing biodiversity and developing an ecologically rich environment. The selected planting palette has been carefully developed to ensure year-round interest with a variety of ground cover, ornamental shrubs, and grasses, hedge, bulb, and trees being proposed to secure a rich variety of species to provide year-round interest.

The ability of the landscape to look good in the darker months is essential as the weather during these months may limit the ability of the residents to move outside therefore the landscape must provide a visual interest to allow for a connection to the surrounding environment to be maintained. The greater the variety of flora within the courtyards and surrounding landscape the greater the variety of fauna, the benefit to the development in the provision of a varied and rich environment will enhance the experience of the residents heightening their experience of nature within the development.

3.0 Land Use and Ecology Considerations

We have considered the individual landscape settings of the site as the scheme have developed. An overarching principle to protect and enhance the green infrastructure where appropriate and to remain sensitive and respectful of the landscape and its context. Boundary edge planting of the site is proposed as a combination of existing retained planting and /or new woodland planting. Native plant material has been considered for the scheme to improve the overall biodiversity of the site and to act as supporting compensatory measure.



Fig 1: Native tree species within the woodland mix

Within the wider open landscape, the green spaces offer an opportunity for the planting of feature tree grouping, including native species. Leaf colour, bark tone and berries have all been considered for the scheme which allows for good contrast and seasonal variation.

The aforementioned tree groupings set within open grassed areas will include under-planted with bulb species to offer 'flurries' of colour from early to late spring. The bulbs selected are pollinator friendly which would conform with the All Ireland Pollinator Plan 2015-2020. Refer to Fig. F below for a representative example of bulb planting proposed.



Fig 2: Naturalised bulb planting proposed within open green area

To plant diverse meadow mixes and managing key grass areas zones as meadows, where practical, and in general enhance the biodiversity of the site and encourage new ecological habitats. Refer to Fig. 4 below. This focus on biodiversity and ecological improvements in the local landscape will offer more amenity value and offer more opportunity for wildlife allowing observation by the end user.



Fig 3: Species rich meadow with wildflower species.

The plants chosen offer special interest as in many cases they will appeal to the senses; include ornamental grasses which can 'rustle' in the breeze and provide seasonal interest, herbaceous perennials and climbers which will provide scent and enliven and evoke memories, colour and plant form which will be of interest but soothing and restful and appealing to the sense of touch

with a variety of leaf forms and seed heads being proposed. Refer to Fig. 4, 5 and 6 below for a representative example of planting proposed.

The plant mix and the layering impact of the trees and lower understorey planting will encourage small nesting birds into these spaces which will offer an invaluable addition to these spaces for the end user.



Fig 4: Planting with variation of plant forms appealing to the senses

Seasonal colour and variety.

By approaching the overall landscape design of the scheme at both macro and micro levels, the scheme delivered on completion will provide a high level of aesthetic appeal, for all residents. Much of the proposed planting is selected due to familiarity, the provision of planting which is familiar to the residents will help to provide a comfortable, homely environment in which each resident feels safe and secure.

Performance

The landscape design post construction will provide year-round visual interest, accessibility and use ability providing the residents with the opportunity to develop a heightened experience of nature within the development. The completed landscape will be functional, comfortable, and distinct to each area of the development.

Whole Life Design

The landscape to each site area has been designed to cater for the needs and various age profiles of all residents. The open minded nature of the design

provided will not limit use of the open spaces because of age or ability, and has been designed to develop clear and defined boundaries between the private, communal open space, boundaries which have been absorbed into the design to allow for a seamless visual landscape.



Fig 5. Trees with year-round interest and Shrub planting with form, colour, and texture

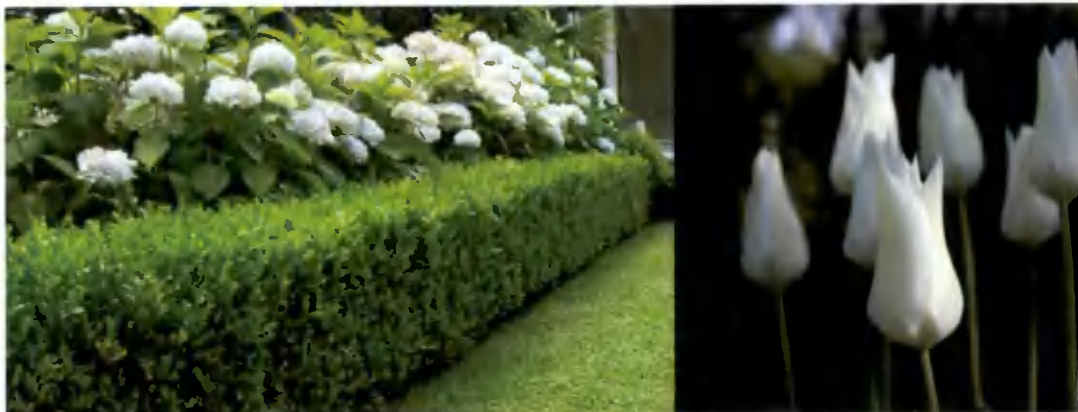


Fig 6. Visual interest with form and colour.

4.0 Site Design

Within the 'infrastructural' landscape, a tree lined entrance and trees within islands in parking areas have been proposed to reduce the impact of the built development and provide a visually appealing arrangement. The trees selected here are fastigiata in nature and have been developed as a street tree specimen where practical we have proposed bio retention tree pits to absorb run off from the parking bays and road surface. The surface materials are

pedestrian subservient this will aid in the reduction of vehicle speed and develop a connected open space between both buildings. Helping to deliver a sense of place for the residents and visitors.

To the north western site area, the design allows for the retention of the existing mature trees with a looping pathway set beneath their canopy. The intent of this design proposal is to provide the residents with a direct connection to nature. The pathway will be constructed using a cellweb system to avoid impact to the roots system of the retained trees. The finished material is a resin bonded gravel which allows water and air access and egress from the root systems of the retained trees.

A series of curving seats with arm and back rests are proposed along the pathway, the width of the pathway varies but always is sufficiently wide to allow ease of movement and passing by residents of all abilities. To the south of the looping pathway a boules court is proposed to provide an active amenity area for the residents. Direct access is also afforded to the residents from the Residential care nursing home to the looping pathway.



Fig 5: Plant material – appealing to the senses

To the southwest of the site within the Priory Lands is a heron nest, it is an objective of the landscape design for the site lands to entice heron nesting

within the site lands to achieve this 3 Nr. heron nest platforms have been located in the north-western site area. Coupled with the heron nest platforms several bat and bird boxes have been proposed across the site. Both the heron platforms and the bat, bird boxes are illustrated on the landscape drawings LP-01-PP.

To the north-eastern site area, the proposed landscape is focused on the provision of an amenity garden for the residents with the provision of allotment an allotment garden. Like the north-western site area, the design addresses the retention of trees and the provision of a pathway network which provides direct access from the buildings to the amenity areas. Beneath the canopy of the retained trees seating is proposed which overlooks the lawn and allotment areas, providing a safe and shaded environment for residents.

The southern site boundary includes a direct east-west pathway. The pathway includes two social spaces and connects with all access points from the western boundary of the building providing residents with a direct link to the looping pathway beneath the retained trees. The background of retained trees and vegetation helps to provide a mature landscape setting for this area of the site.

The eastern site boundary with the Old Greenhills Road is key to the success of the development and the forming of a new address to the Old Greenhills Road. Currently the area contains a series of poplar trees. As detailed in the AA screening report these Lombardy Poplar (*Populus nigra* var. *Italica*) have a low biodiversity value, coupled with an invasive root type. Under the current scheme we are proposing to remove these trees and replace them with a line of columnar Oak which will form a strong visual impact and increasing the biodiversity value of the boundary with the Greenhills Road.

Across the site lands grass swales have been proposed at pathway edges these SUDS swales have been proposed to absorb surface water from the pathways to slow the flow and treat the surface water prior to its release into the mains drainage system.

To south-eastern site boundary additional tree planting is proposed to add strenght on longevity to the retained Cherry, Alder, Ash and Leyland Cypress. Trees.

As part of the development works for the creation of the landscape the stone removed from the existing eastern boundary wall to accommodate the entrance will be reused within the landscape.

As part of the preplanning process the draft landscape plan was issued to South Dublin County Council Parks Department and a 'teams' preplanning review consultation was held in January with South Dublin County Council Parks Department. Following this meeting several alterations were made to the landscape plan in line with the items raised by SDCC Parks Department. These included,

- The addition of exercise equipment on the looping walkway
- The development of a biodiversity management plan,
- The inclusion of Bat and Bird boxes
- The provision of SUDS measures including bio retention tree pits and swales.

All these items have been included as part of the landscape plan submitted as part of the Greenhills Road planning application.

5.0 Landscape Performance Standards

The regular care and maintenance of any area of landscape has a profound effect on its appearance, its value as an amenity, ecological and biodiverse open space and, in the longer term, its plant structure and overall nature. The right levels of maintenance, and the methods to be used, will vary considerably from site to site as well as being influenced by the layout and desired end use of the open space areas, the maintenance required will also be a reflection of the soil types, topography, exposure to the elements and local climatic variations.

Matching the maintenance regimes to the needs of a site is a major part of landscape management and it is not possible to give any absolute prescription or standard specification that can be applied for a particular type of landscape. However, this chapter attempts to describe and define the main operations that go into routine maintenance. Under the heading of each main type of landscape feature there are performance specifications and objectives for the various operations.

General Landscape Performance Standards

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General Landscape Performance Standards

Type	Description	Maintenance Objective	Maintenance Operations
Amenity Grassland	Amenity grassland describes all natural and semi-natural grassland used for recreation purposes as distinct from that used for productive agriculture. It forms the major part of the landscape and its maintenance requires more time during the summer growing season than any other activity	To provide an even stand of vegetation of uniform height and colour comprising predominantly of grass species, although a small percentage of dicotyledonous plants - no more than 5 per cent - will be accepted.	<ul style="list-style-type: none"> Mowing shall be carried out using a cylinder mower to maintain the vegetation length within the limits of 30 mm and 35mm during April to August inclusive and between 35 mm and 50 mm during the rest of the year. (This will normally require mowing at up to once a week in the peak of the season and up to 20 times per year). The 'arising' shall be collected and discarded appropriately off site by the Landscape Contractor. At no stage must arisings come to rest on paved or planted areas. All edges of grass areas, against buildings, footpaths, roadways, trees, posts and any other obstruction shall be kept neat, trimmed and tidy. Mowing strips against walls, etc. shall be 100 mm wide and may be maintained using an appropriate approved herbicide. Border edges shall be clipped and not be allowed to exceed 75mm length. Grass areas may be sprayed overall with a suitable approved selective herbicide in accordance with the manufacturer's instructions. Alternatively, spot weeding of isolated weed infestation may be carried out. Fertilisers to be applied in the period of March to April and in period September to October as noted above. Provisional item Reinstatement by re-turfing or re-seeding of worn areas may be undertaken as necessary.
Meadow Grassland	Wildflower meadow grassland areas, these open habitats are areas are seeded with a wildflower meadow mix to attract wildlife and support flora and fauna.	To provide a low maintenance naturally occurring wildflower rich meadow with mown grass pathways. Providing cover and food for wildlife through the development of a habitat rich environment with pollinator plants.	<ul style="list-style-type: none"> Mowing, the whole area should be trimmed back to approximately 100mm height using a tractor pulled mower or strimmer in Autumn Raking, the cut material should be raked off and removed off site. The raking will help open up the ground and allow any fallen wildflower seed to establish in the following year.
Planting Areas (Shrubs/Herbaceous)	The borders must be kept weed free, particularly of perennial weeds, to allow planting to give early cover. However, the plants may be required to be thinned so that the shrubs that are retained are able to achieve an attractive form. This may involve removing the intermediate plants soon after shoots are touching.	Maintain shrub growth to cover as much as possible of the border area and allowing the individual plants to achieve as nearly as possible their natural form. Maintain the borders free of visible weeds and shape and prune the shrubs to avoid obstructing pathways or blocking light to or adhering to windows.	<ul style="list-style-type: none"> After planting, if appropriate and in season for the species involved, prune shrubs to develop their desirable ornamental characteristics. At the same time remove intermediate plants that are restricting the natural and attractive development of their neighbours. Remove all arisings from site. If plants have become over mature, rejuvenation by a once over complete coppice is recommended; however, this should be reviewed with the Employer in the first instance. Lightly cultivate the surface soil, to a depth of approximately 50 mm, remove or bury all annual weed or natural litter and break any surface capping.

Type	Description	Maintenance Objective	Maintenance Operations
Newly Planted Trees	Young trees will need regular attention to ensure establishment. Either guards or fencing have been used to protect the plant against rabbits, etc. The most important operation is to keep the soil around the base of the tree free from weeds or grass and to ensure secure and correct staking.	Establish a stable and healthy growing tree with a well-shaped framework for future growth.	<ul style="list-style-type: none"> • Take special care to avoid unnecessary damage to the shrub plants and ensure that all the shrubs are firmly bedded in the soil. Leave the surface with a fine and even tilth with soil crumbs of less than 50 mm in diameter. Once a year operation (in early winter). Note: This operation is only essential where the soil is compacted or as a means of incorporating mulch. Not required where the areas are mulched. • Maintain the soil surface substantially free of weeds (less than 10 per cent weed cover) by hand removal and spot treating with Glyphosate, or approved equivalent. Spot treatment at approximately four-weekly intervals in the main growing season, to a total of five times per season. Note: As an alternative the borders can be regularly hand-hoed at up to two-weekly intervals in the main growing season, to 6 times per year. This procedure is recommended for the first year after planting when the plants may be more sensitive to contact herbicide damage and residual herbicides may not be used. • Immediately after planting or, as required and where subsequently directed, mulch the surface of the border with a 50 mm layer of pulverised bark (maximum particle size 40 mm), or another approved equivalent. Thereafter, top dress the mulch as necessary and at least once a year to maintain effective cover. Spot treat or remove any emergent weeds as specified in c) above but do not cultivate or incorporate the mulch into the soil.
Hedging		Regularly clip hedges to maintain a uniform and tidy appearance (according to the type of hedge and situation) and a well-developed cover of vegetation	<ul style="list-style-type: none"> • Maintain a 1 m diameter circle of plant-free soil around the base of each isolated tree by hoeing or the use of approved herbicide other than a residual. Avoid strimming around the base of standard trees which readily damages young bark. Allow for hoeing up of soil once every 4 weeks in the growing season (5 times per year). Allow for herbicide treatment once in the winter or spring and 3 additional treatments. Note: In some areas this operation may be replaced by the application of bark mulch as ground cover. • Cut back any tall vegetation that is threatening to shade or smother the young tree (i.e. taller vegetation growing from outside the 1 m weed free area). Allow for cutting back regularly (3/4 times a year). • If required, water the newly planted trees throughout the summer months (May to August) as required after any period of 4 weeks without significant rainfall (less than 5 mm). Apply sufficient water to thoroughly wet the top 150 mm of soil around the tree roots. This will normally require approximately 10 liters for a seedling or whip and 20 liters for a standard tree. Supply/transport of water to be the responsibility of the Landscape Contractor. • Check stakes and ties for firmness and support and adjust as necessary. Allow for checking twice a year, preferably in late spring and late summer. • Firm the soil around the roots to ensure that the plant is securely planted in the ground and upright. Allow for firming once in the spring after planting. • Formative prune to remove any dead, diseased or damaged shoots and create a balanced form for future growth. Allow for pruning once in the season after planting. • Where tree guards, stakes, ties, strimmer guards, rabbit guards and temporary fencing is no longer deemed necessary, the contractor shall allow for removing and discarding of these elements appropriately off site. • Clip the top and sides of the hedge to maintain true and even levels and using suitable mechanical cutters to maintain the shape and height. Remove any cuttings lodged in the surface of the hedge and rake up and remove all arisings.

		<p>over the whole of the hedge surface. Control any weed or grass growth at the base of the hedge so that it does not detract from the overall appearance or adversely compete with the hedge.</p>	<ul style="list-style-type: none"> Allow for the operation to be carried out to suit the species and position of the hedge. Maintain weed-free 750mm wide band at the base of the hedge (weeds at a maximum height of 100mm and a maximum ground cover of 10%) by regular hand removal, hoeing or using approved herbicide. Allow for control once every 6 weeks in the main growing season (4 times per year).
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Type	Description	Maintenance Objective	Maintenance Operations
Litter Clearance	Collect and remove from the site, all extraneous litter and rubbish on a regular basis so that its presence is not detrimental to the appearance of the site. (This means that the site should be free from litter after each visit to site).	Regularly sweep or clean paved surfaces to keep it clear of litter or other debris that will detract from the appearance of the site. Keep the surface free from weed (including moss) growth and all associated drainage gullies in working order.	<ul style="list-style-type: none"> Collect and remove and dispose appropriately off site all extraneous rubbish, not arising from maintenance works, which is detrimental to the appearance of the site. This rubbish to include stones (over 50mm dia. which may be buried), bricks, debris, paper, confectionery and other wrappings, bottles, cans and plastic containers. Allow for this operation to be carried out at regular intervals based in conjunction with other maintenance visits and operations. Collect and removed and disposed of appropriately off site all extraneous matter which has deliberately been deposited on the site by persons known or unknown (fly-tipping). Such matter to include bricks, rubble, garden and household refuse, discarded domestic appliances, furniture and scrap metal. Priced per occasion based on an estimate of the volume of material to be collected.
Pathway Areas			<ul style="list-style-type: none"> Sweep all pathway areas at regular intervals and remove all arisings from the site. Frequency may vary according to time of year or other maintenance operations. Hand or mechanical - sweeping may be used. Control all annual weed (moss) growth by the application of residual weed killer. A single application in March/April should normally be sufficient but follow-up spot treatment may be necessary in late summer. Clear silt and extraneous matter from the drainage gullies, including the lifting and replacement of the drain cover. Programme for once every six months but more frequently where silting up is a particular problem. Inspect and clear any leaves and other litter from drain gully covers. Programme for up to once a week in the autumn when the where there is likely to be heavy leaf fall.

