

**CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN**

Dunnes Stores Kilnamanagh Shopping Centre Extension
Kilnamanagh, Dublin 24
Co. Dublin



LANDSCAPE DESIGN REPORT

Job no. 22146

October 2022 Rev A

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SITE LOCATION & CONTEXT

The subject site is situated within the existing grounds of Dunnes Stores Kilnamanagh Shopping Centre, Dublin 24. The proposed development will consist of an extension to the existing stores eastern side and associated alternations to the carpark and building profile over the site area of 25,847m². The shopping centre is surrounded by residential areas. St. Kevin's Church, Kilnamanagh Credit Union, and a large industrial estate.

The shopping centre is a single large building located in the centre of the site and surrounded by carparking along all four sides. The land is relatively flat (86-89m AOD) with slight decline in elevation towards the northern end. The main vehicle/cycle entrance is along the eastern boundary off Treepark Road with another entrance to the western boundary along Treepark Road which is also the access point for the delivery goods vehicles. There are also several pedestrian access points on the eastern, southern and west boundaries. The main one is to the south off Mayberry Road which leads directly to the front of the building's. While there are several breaks in the eastern boundary which connect onto the lane leading up to the Kilnamanagh Credit Union building.

Vegetation cover is limited to the boundary edges along narrow strips or wider areas on the corners.

Tree cover is predominately along the southern boundary and continues along the eastern boundary to the main entrance,. The trees species include Alder, Sycamore, Lime, Rowan and Ornamental Cherries and Black Pine which have been assessed by an arborist as being mostly Middle Age and varying Moderate to Low quality. Tree cover along the surrounding streets provides a distinct avenue of trees next to the site boundary.

Much of the understorey level planting is amenity grassland with very limited shrub cover on site. Some areas of grass have been recently replaced by meadow wildflower strips as part of the Dunnes Pollinator Plan.

Dunnes Stores Kilnamanagh Shopping Centre Extension



Site location and context (site outlined in red).



View of the western end sections of the site's existing car park. View of the eastern end end of the site's existing car park.



View of the southern edge and southwestern corner of the site's existing car park.



View of the northern end of the site's existing car park.



View of the eastern entrance.

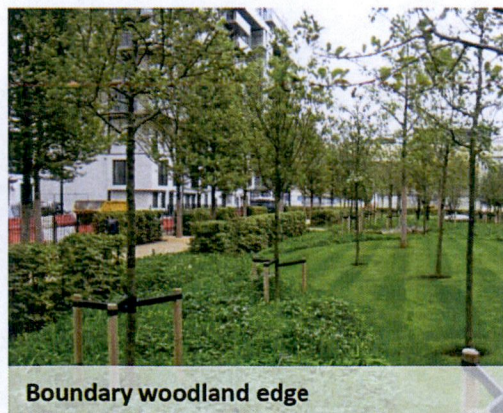
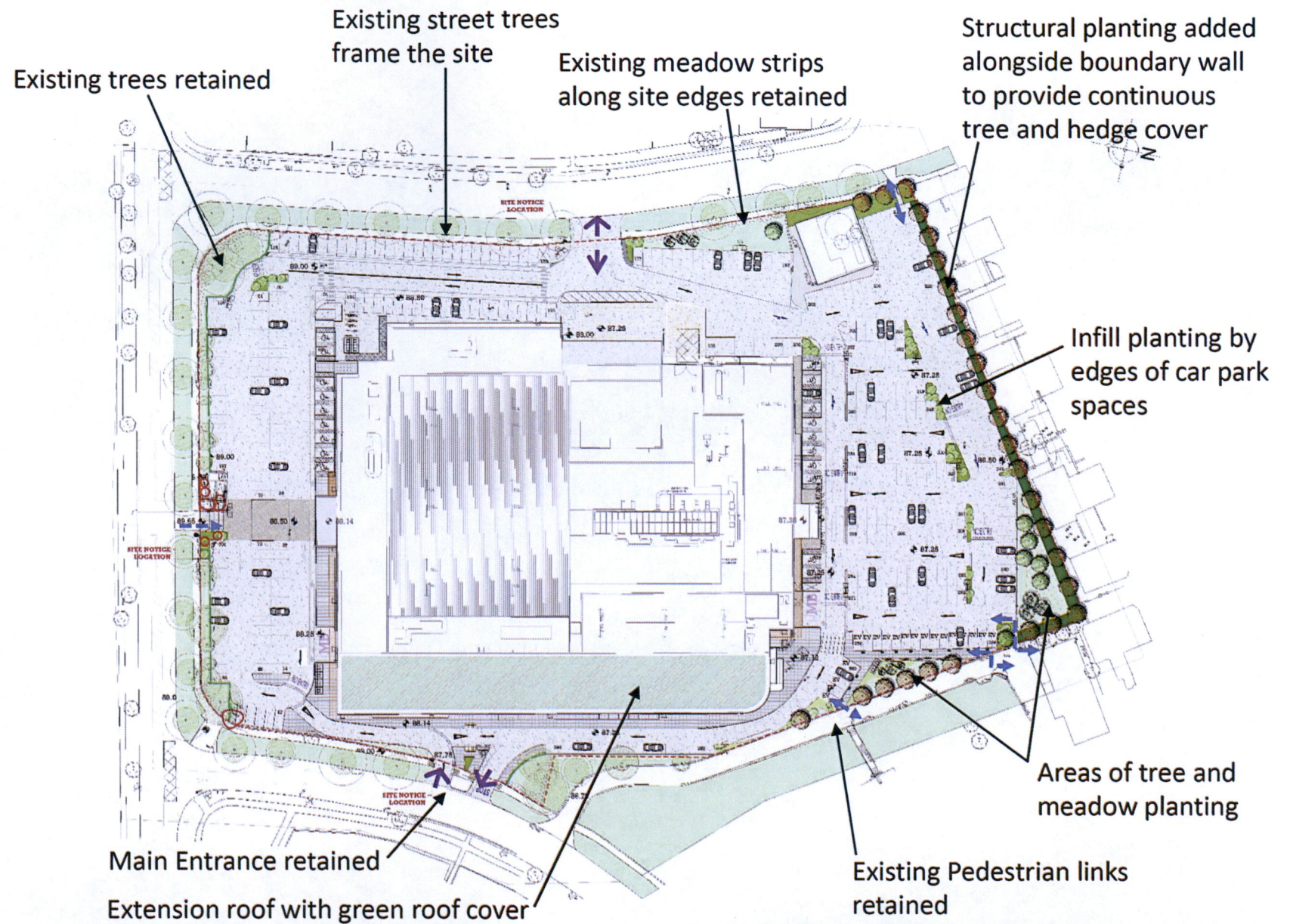
LANDSCAPE DESIGN CONCEPT

Dunnes Stores Kilnamanagh Shopping Centre Extension

Landscape Design Objectives

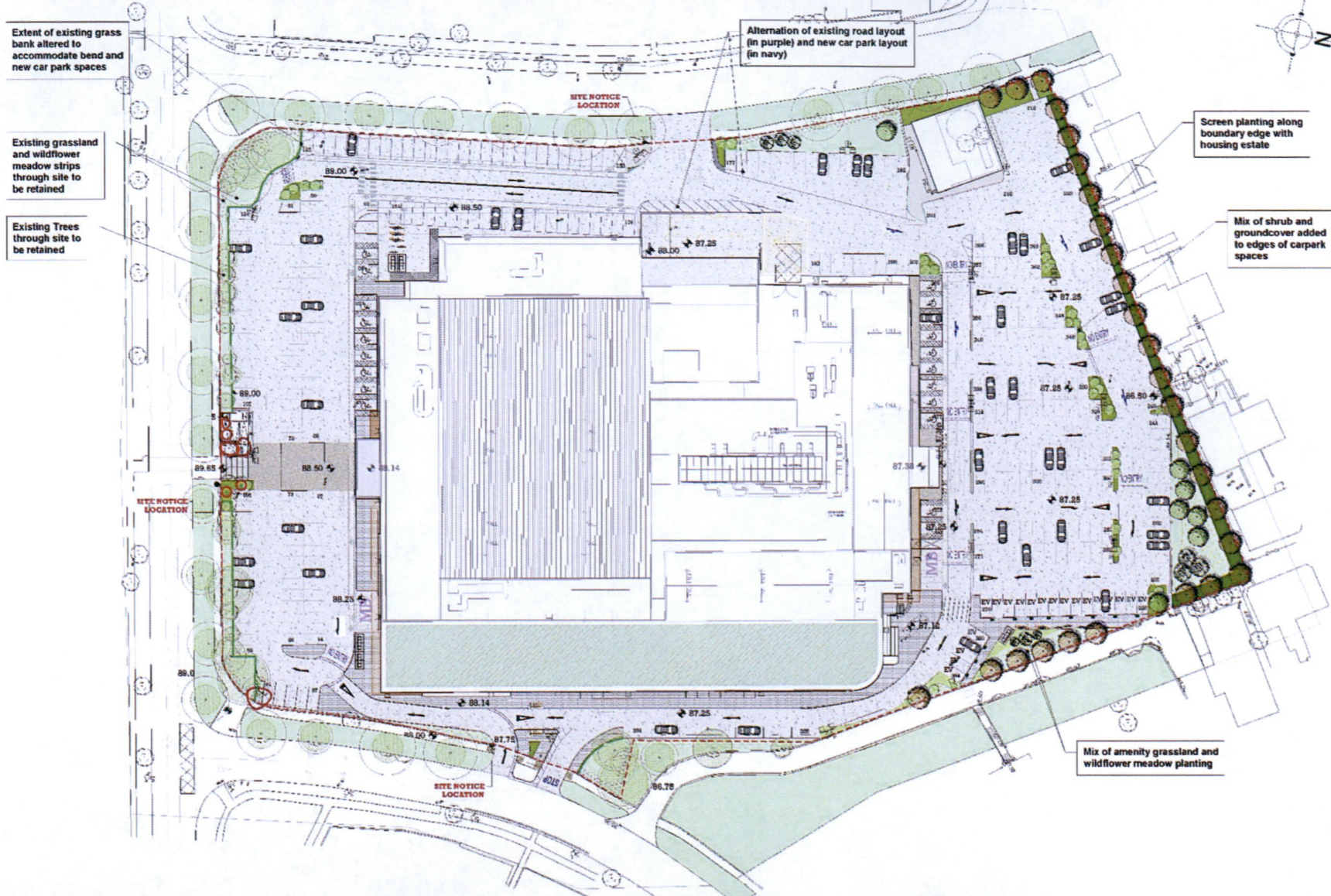
In incorporating the site features, SDCC planning policies and development constraints, the following were determined to be the main aims and objectives for the landscape design proposals.

- To retain existing trees where ever possible.
- Enhancement of the existing boundary edges and carpark area with planting to help soften their appearance
- To provide for new and enhanced biodiversity and wildlife habitats that connect into the wider green infrastructural corridors, and incorporate the all Ireland pollination plan and Dunnes Stores Pollinator Plan.
- Proposed planting will be of a high quality and complement the improvements to the existing buildings facade along with its new extension to create an attractive space for staff and users of the shopping centre that will be a notable improvement to the centre's existing setting
- Ensure universal access for all abilities through the development with improved linkage for pedestrians and cyclist from the shopping centre out to the surrounding residential areas.
- Incorporate as much nature based SuDS requirements as is feasibly possible.



LANDSCAPE MASTERPLAN

Dunnes Stores Kilnamanagh Shopping Centre Extension



LEGEND

- EXISTING TREES AND SHRUBS TO BE REMOVED
- EXISTING TREES TO BE RETAINED WITH ROOT PROTECTION AREA & PROTECTION FENCING
- EXISTING GRASSLAND
- EXISTING WILDFLOWER MEADOW STRIPS
- STREET TREES
- SPECIMEN TREES
- PARKLAND SPECIMEN TREES
- SHRUBS AND GROUND COVER PLANTING
- HEDGE PLANTING
- AMENITY GRASS AREA
- IRISH WILDFLOWER CONSERVATION GRADE SEED MIXTURE
- SEDUM MAT GREEN ROOF SYSTEM To Architects Spec
- EXISTING CONCRETE BLOCK PAVING
- CONCRETE BLOCK PAVING SILVER & BLACK GRANITE COLOUR To Architects Spec
- CAR PARK ASPHALT SURFACE
- EXISTING CONCRETE SURFACE
- EXTENDED CONCRETE SURFACES To Engineers Spec
- LIGHTING To Engineers Spec
- SITE BOUNDARY

GENERAL NOTES:

- a. To be read in conjunction with all other drawings.
- b. Do not scale off drawing. Refer to dimensions given.
- c. This drawing is for planning purposes only.
- d. All products are as indicated or equivalent.

B	25/10/22	Parking Layout Updated RFI
A	26/7/22	Parking Layout Updated
REV	DATE	AMENDMENT

SPECIES	SIZE	SPACING	%
PROPOSED STREET TREES - All trees to have straight, unsupported leaders with symmetrical crowns			
<i>Carpinus betulus</i> 'Fastigiata' 1.6m clear stem	18-20cm girth, 6/3_R3	as shown	30
<i>Pinus cembra</i> 'Chamaeceras' 7m clear stem	18-20cm girth, 6/3_R3	as shown	40
<i>Acer dasycarpum</i> 'Emerald Queen'	18-20cm girth, 6/3_R3	as shown	30
PROPOSED SPECIMEN TREES - All trees to have straight, unsupported leaders with symmetrical crowns			
<i>Malus bohmiana</i>	18-18cm girth, 6/3_R3	as shown	30
<i>Amelanchier arborea</i> 'Robin Hill'	18-18cm girth, 6/3_R3	as shown	30
<i>Scorbus aucuparia</i>	18-18cm girth, 6/3_R3	as shown	20
PROPOSED PARKLAND SPECIMEN TREES - All trees to have straight, unsupported leaders with symmetrical crowns			
<i>Betula pendula</i>	18-18cm girth, 6/3_R3	as shown	70
<i>Arcus glabrescens</i>	18-18cm girth, 6/3_R3	as shown	30

SPECIES	SIZE	SPACING	%
GROUNDCOVERS AND ORNAMENTALS - mass plant in blocks of same species - block areas range from 5-15m ²			
<i>Eschscholzia affinis</i>	SL PG	4m ²	10
<i>Chamaecrista x acutiflora</i> 'Yell Poinsett'	2L PG	4m ²	5
<i>Lavandula angustifolia</i> 'Hidcote'	2L PG	7m ²	10
<i>Viburnum davidii</i>	SL PG	4m ²	10
<i>Platyrhynchus terminalis</i> 'Green Carpet'	2L PG	6m ²	10
<i>Hypochaeris glabra</i> 'Hidcote'	3L PG	2m ²	10
<i>Viburnum x burkwoodii</i>	3L PG	2m ²	5
<i>Ulex europaeus</i>	3L PG	2m ²	10
<i>Hesperis matronalis</i>	3L PG	4m ²	10
<i>Viburnum opulus</i> 'Compactum'	SL PG	3m ²	5
<i>Fuchsia magellanica</i> 'Hidcote'	SL PG	2m ²	5
<i>Abutilon japonicum</i> 'Village Gate'	SL PG	2m ²	5
<i>Cercis canadensis</i> 'Forest Pinky'	90-120cm ht PG	1m ²	5

SPECIES	SIZE	SPACING	%
HEDGE PLANTING			
<i>Prunus laurocerasus</i>	60-80cm high PG	5/m	20
<i>Viburnum opulus</i> 'Roseum'	60-80cm high PG	5/m	20
<i>Fagus sylvatica</i>	100-120cm high PG	5/m	60
WILDFLOWER PLANTING MIX - wildflower seed mixes to be comprised of native species collected and grown on the island of Ireland. Wildflower seed mix to include:			
<i>Lotus corniculatus</i>			
<i>Agrostis reptans</i>			
<i>Prunella veris</i>			
<i>Taraxacum officinale</i>			
<i>Veronica chamaedrys</i>			
<i>Campanula rotundifolia</i>			
<i>Trifolium pratense</i>			
<i>Trifolium repens</i>			
<i>Thymus serpyllum</i>			

SPECIES	SIZE	SPACING	%
AMENITY GRASS - Repair grass areas following works. 60%Fescue sp. 20% Brown bent top			
R3	R3	R3	R3

CUNNANE STRATTON REYNOLDS LAND PLANNING & DESIGN

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PROJECT:	Dunnes Stores Kilnamanagh SC Extension, D24	DATE:	JULY 2022
DRAWING:	Landscape Masterplan	SCALE:	1:500 @ A1
		DRAWN:	HT
		CHECKED:	RF
		DRAWING NO.:	22146-2-100

See Landscape Masterplan 22146-2-100 Rev B for details Scale: NTS

GREEN INFRASTRUCTURE

Dunnes Stores Kilnamanagh Shopping Centre Extension

The green infrastructure plan for this development will draw upon that set out in the South Dublin Country Development Plan.

The scheme will:

- Utilise the existing GI network of paths, roads and open spaces by connecting into these corridors.
- To design the site's corridors as effective corridors for pedestrians, cyclists and wildlife which link into the existing green streets and open spaces within the immediate area and connecting into the wider green infrastructure network including Tymon Park Core Area and the nearest SDCC primary M50 GI and secondary Tallaght Urban Link and Tallaght Rural Links GI corridors.
- The proposals will seek to retain and enhance existing planting across the site's existing car park edges with minimal loss of existing vegetation. The proposals will include a mix of trees, hedgerow, shrub and short and long meadow grassland including native species which will support a rich diversity of invertebrates, birds and mammals species.
- The Landscape Masterplan provides details of the existing vegetation to be removed, existing trees being retained and the mix of new planting through the site.
- All planting will be selected that is supportive of the All Ireland Pollinator Plan and Dunnes Stores own Pollinator Plan.
- Sustainable Urban Systems (SUDS) in the form of attenuation of surface overflow will be implemented including a green roof on the building's extension.



Green Infrastructure and Recreational Spaces within 1km of the Proposed Site: Scale: NTS



Wildflower meadow planted as part of Dunnes Stores Pollinator Plan

Along site's western boundary with avenue of trees lining Treepark Rd



Trees by main entrance of site with others in the adjoining church grounds



- Open Spaces
- Key Tree Lines
- Key Tree Groups
- Site Location
- Public Parks
1 – Tymon 2 -Bancroft



- Trees removed on site
- Specimen trees
- Proposed parkland trees
- Street trees - outside of boundary retained
- Trees retained on site
- Shrub planting
- Existing wildflower meadow
- Proposed wildflower meadow
- Sedum mat green roof
- Green streets
- Open space area

Green Infrastructure within the proposed site and the immediate area

Scale: NTS

GREEN INFRASTRUCTURE - POLLINATOR PLAN - GREEN SPACE FACTOR Dunnes Stores Kilnamanagh Shopping Centre Extension

Pollinator Plan:

Dunnes Stores has implemented a Pollinator Plan across its stores in order to help improve biodiversity around their grounds. Signage has been added to help inform customers of the benefits of the scheme and to engage in conservation.

Measures already implemented across Dunnes Stores Kilnamanagh include replacing five areas of grassland with wildflower meadow strips. The proposed landscaping seeks to further increase the area of wildflower meadow cover along with enhancing the existing retained tree cover with new trees and shrub species that include pollinator friendly species and which provide suitable nesting habitat.

Dunnes Stores Pollinator Plan

One third of our bee species is threatened with extinction from Ireland. This is because we have drastically reduced the amount of food (flowers) and safe nesting sites in our landscapes. The All-Ireland Pollinator Plan is about all of us, from farmers to local authorities, to schools, gardeners, and businesses, coming together to try to create an Ireland where pollinators can survive and thrive.

We aim to

1. Protect areas that are already providing food and shelter for pollinators, like ivy covered walls and trees, existing lawns with wildflowers and trees / shrubs
2. Mow 1/3 of all grassy areas under a pollinator friendly regime, this means less cutting during flowering periods
3. Plant clover into existing lawns and cut less to allow flowering
4. Plant pollinator friendly bulbs
5. Plant pollinator friendly trees and shrubs
6. Create a pollinator friendly flower bed and add appropriate plants to existing beds
7. Plant a native wildflower meadow in areas suitable for such
8. Provide nesting habitats in addition to food, pollinators need safe places to live like Hedgerows greening of walls with wall covering plants holes in trees
9. Reduce use of pesticides, Pesticides include insecticides, fungicides, and herbicides, all of which can be harmful to pollinators Eliminate use of herbicides and adopt pollinator friendly pesticide code
10. Customer awareness-through signage this also helps to educate people and hopefully inspire them to take on some of these actions.

Implementing this plan should cause minimal disruption to stores or customers, this will cause a flurry of conversation with customers as we've discovered through the implementation of the Newbridge project we have received nothing but positive feedback and delight as the wildflower meadows start to bloom.



Early flowering Wildflowers, Note longer grass to the left this is clover and smaller wildflowers



Midsomer wildflowers note the change in colour as other varieties come into bloom

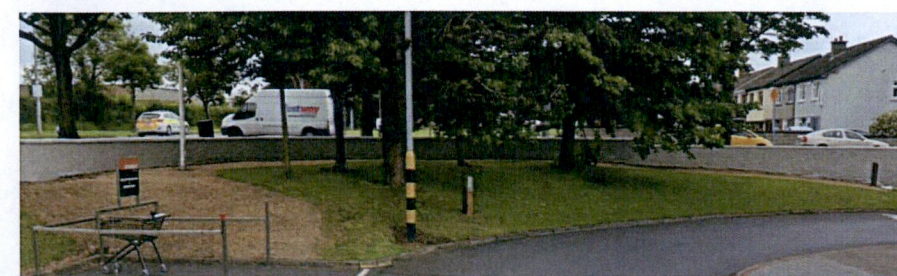


Lavender in the foreground with early growth of wildflowers in the background, colours are faint at this stage



Selection of pollinator plants showing variety of colour and an example of the sign used

Dunnes Stores Pollinator Plan Information leaflet



One area of newly planted wildflower meadow (pale coloured area) with two wooden Information signage posts at Dunnes Stores Kilnamanagh Shopping Centre

South Dublin Green Space Factor:

Green Space Factor (GSF) has been calculated for both the existing site and the proposed development to help compare the difference, as indicated in the accompanying tables.

- The existing site GSF is rate: **0.06**, which is -0.44 below the required scoring for district centres.
- The proposed development's GSF across the same site area is rated: **0.12**, which is -0.38 below the required scoring for district centres.

Although the proposed rating is short of the requirements for a District Centre it has doubled the GSF of the existing facilities through the proposed implementation of a range of planting types and SUDS measures, including tree lined boundaries and a green roof across the building extension roof which enhance the local Green Infrastructure. The scoring is constricted by the existing building which occupies a large portion of the overall site.

Summary of Site's Tree and Hedgerow cover:

The table below indicates the quantities of tree and hedgerow planting being replaced, retained and newly planted. Further details of existing trees and hedgerows being retained and removed can be found in the supporting arborist's report and plans. While details on the proposed development's new and retained landscape planting are detailed in the Landscape Masterplan (Dwg: 22146-2-101) and SDCC's Green Factor Score table opposite page.

The table shows there is significant gains to the tree and hedgerow cover across the site, which compensate for the small tree loss required to facilitate access to the development.

Vegetation Type	Quantity				
	Existing	Removed	Retained	Proposed	Difference
Trees	31no.	7no.	24no.	43no.	+36no
Hedgerow	0m2	0m2	0m2	290m2	+290m2

GREEN INFRASTRUCTURE - GREEN SPACE FACTOR

Dunnes Stores Kilnamanagh Shopping Centre Extension

Table A: Site's Existing GSF Scoring

Table B: Site's Proposed GSF Scoring

Green Space Factor Tool South Dublin County Council		Comhairle Contae Átha Cliath Theas South Dublin County Council	
User input indicated by Orange fields			User Input
Dunnes Stores Kilnamanagh Shopping Centre EXISTING SITE			Zoning lookup DC
			Minimum GI Score 0.5

Green Space Factor Tool South Dublin County Council		Comhairle Contae Átha Cliath Theas South Dublin County Council	
User input indicated by Orange fields			User Input
Dunnes Stores Kilnamanagh Shopping Centre PROPOSED LAYOUT			Zoning lookup DC
			Minimum GI Score 0.5

1. Enter Development Site Area m ² HERE		25847	
Surface Type (see tab for detailed descriptions)	Factor	Proposed Surface Area m ²	Factor Values
1. Short Lawn	0.3	1439	432
2. Tall Lawn (wild, not mown)	0.5	0	0
Permeable Paving	0.3	0	0
Vegetation			
4a. Vegetation-Shrub below 3cm	0.4	0	0
4b. Vegetation-Shrub / Hedgerow above 3cm	0.5	41	21
4c. Vegetation-Pollinator friendly perennial planting	0.5	155	78
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	0	0
5b. Preserved trees	1.2	796	955
7. SuDS intervention (rain garden, bioswale)	0.6	0	0
Green Roof		0	0
9a. Green Roofs- Intensive green roof (substrate is 1 metre or greater in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (less than 1 metre in depth)	0.6	0	0
10. Green wall	0.4	0	0
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
Total Equivalent Surface Area of Greening Factors		2431.00	1484.90
	Green Factor	0.06	

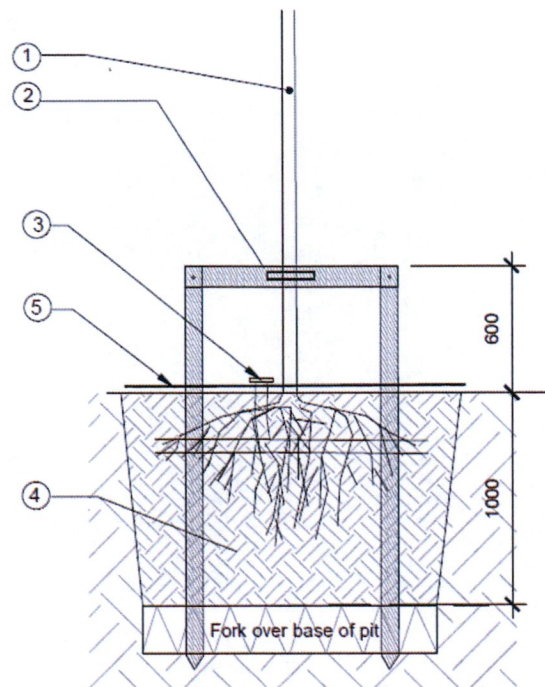
1. Enter Development Site Area m ² HERE		25847	
Surface Type (see tab for detailed descriptions)	Factor	Proposed Surface Area m ²	Factor Values
1. Short Lawn	0.3	735	221
2. Tall Lawn (wild, not mown)	0.5	504	252
Permeable Paving	0.3	0	0
Vegetation		0	0
4a. Vegetation-Shrub below 3cm	0.4	0	0
4b. Vegetation-Shrub / Hedgerow above 3cm	0.5	724	362
4c. Vegetation-Pollinator friendly perennial planting	0.5	504	252
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	630	378
5b. Preserved trees	1.2	722	866
7. SuDS intervention (rain garden, bioswale)	0.6	0	0
Green Roof		0	0
9a. Green Roofs- Intensive green roof (substrate is 1 metre or greater in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (less than 1 metre in depth)	0.6	1420	852
10. Green wall	0.4	0	0
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
Total Equivalent Surface Area of Greening Factors		5238.70	3182.72
	Green Factor	0.12	

Minumum Required GI score	Final GI score	Result
0.5	0.06	-0.44

Minumum Required GI score	Final GI	Result
0.5	0.12	-0.38

PLANTING DETAILS

Typical Planting Details

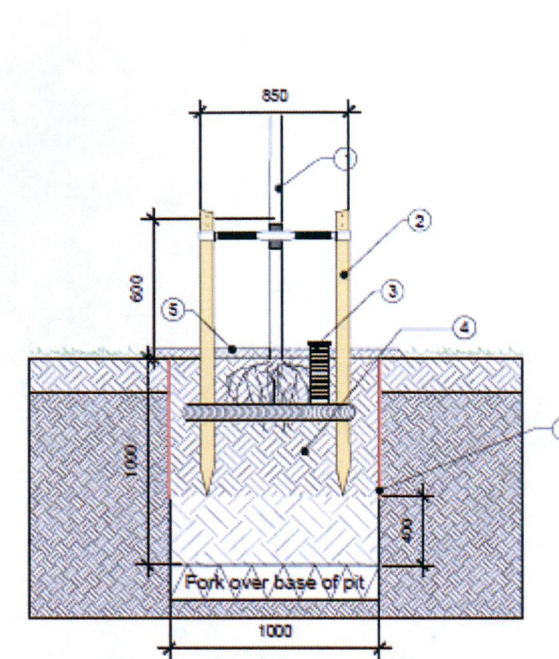


NOTES

- ① To have a clear stem height of 2000mm.
- ② 2no. 75mm diameter stakes pressure treated driven 1300mm below ground 600mm above ground with specified biodegradable adjustable tie affixed to tree & stake.
- ③ 6cm diameter perforated flexible plastic drainage pipe positioned as shown over rootball with one end open to surface to facilitate watering.
- ④ Pits to be size 1x1x1m or 15cm wider than rootball which ever is greater. Remove the full depth of topsoil and set aside for reuse. Scarify sides, break up base of pit to a depth of 200mm and incorporate a soil ameliorant into base. Back fill pit with topsoil mixed with soil ameliorants in 150mm firmed-in layers. All planting to receive a minimum of 25lt water per m2 immediately after planting.
- ⑤ 50mm bark mulch in 80cm dia circle to base of trunk.

*FOR SEMI-MATURE TREES INCREASE TREE PIT SIZE ACCORDINGLY

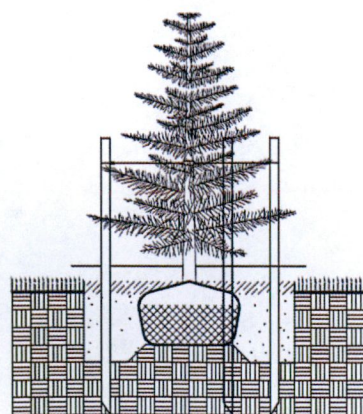
Tree Pit Detail 14-20xm Gth – Soft Area Verges Topsoil Buildout
Scale 1:50@A3



NOTES

1. Tree to have a clear stem as indicated on planting plan.
2. 2no. 75mm diameter stakes pressure treated driven min 1000mm below ground 400 - 600mm above ground, with specified biodegradable rubber strap around wire at tree and nailed to 100x30x950mm crossbar. Locate stakes 475mm from tree trunk.
3. 6cm diameter perforated flexible plastic drainage pipe positioned as shown over rootball with one end open to surface to facilitate watering and capped.
4. Tree pits to be min. size 1000 x 1000 x 1000mm or 150mm greater than rootball which ever is greater. Remove the full depth of topsoil and set aside for reuse. Scarify sides and back fill pit with 400mm depth of subsoil in 200mm layers and lightly firmed in. Incorporate a soil ameliorant into base and back fill remainder of pit with topsoil mixed with soil ameliorants in 150mm firmed-in layers. All planting to receive a minimum of 25 lt water per m2 immediately after planting.
5. 50mm medium grade bark mulch in 800mm dia circle to base of trunk.
6. Root protection barrier. Product: GreenBlue Urban Reroot 600 or equivalent. Joints to be taped.

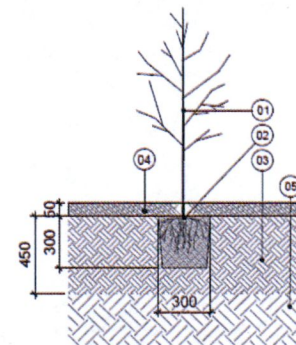
Tree Pit Detail with root barrier – in Grass/Shrub Area
Scale 1:50@A3



NOTES

- ① 3no. 7.5cm Ø stakes pressure treated driven 1300 below ground 40-60cm above ground, (depending on the height of the tree) with specified biodegradable rubber hose around wire at tree and nailed to stakes. Locate stakes 45cm from tree trunk.
- ② 6cm diameter perforated flexible plastic drainage pipe positioned as shown over rootball with one end open to surface to facilitate watering.
- ③ 50mm mulch, as per spec., to base in 60cm dia. circle.
- ④ Pits to be size 700mmsq. or 15cm wider than rootball. Remove the full depth of topsoil and set aside for reuse. Scarify sides, break up base of pit to a depth of 200mm and incorporate a soil ameliorant. Fold down or cut and remove top 1/3 of burlap if non-biodegradable wrap is used, remove totally. All planting to receive a minimum of 5-10lt water per m² immediately after planting.

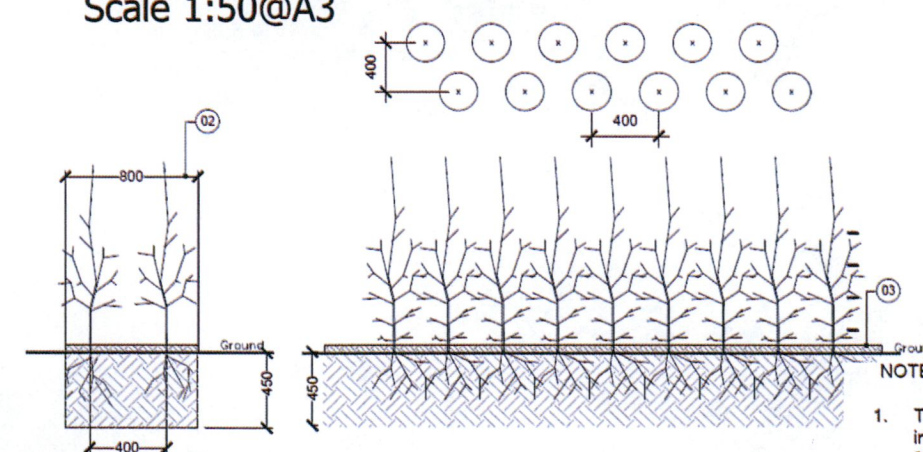
Conifer & Multi Stem Planting Detail
Scale 1:50@A3



NOTES:

1. Proposed Shrub/Whip.
2. Excavate pit 300 x 300 x 300mm, fork over base to 150mm depth and scarify walls of whip pit prior to planting. Backfill with topsoil with ameliorant incorporating as per specification, Lightly firming in layers of 150mm. Water with 3lt of water immediately after planting.
3. 450mm topsoil.
4. 50mm depth, 6mm medium grade bark mulch.
5. Min. 300mm subsoil below planting.

Planting Pit for Shrubs/Whips
Scale 1:50@A3



Hedge Planting Detail Double Row
Scale 1:50@A3

NOTES :

1. The hedge planting is to be carried out in a single trench dug 800mm wide x 300mm deep and to the required length. Mix the dug soil with the spec. ameliorants. Break up the soil in the base of the trench by 150mm.
2. Prepare the plants by: pruning back any damaged roots to healthy growth; placing roots of waiting plants in water whilst planting. Place the plants in the trench, 400mm between the plants in each row. Plant rows staggered with 300mm between each row. Backfill the trench to half its depth and firm by treading. Continue planting the trench. Once planted, backfill with the remaining soil and firm as before.
3. 50mm medium grade bark mulch

MATERIAL FINISHES

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



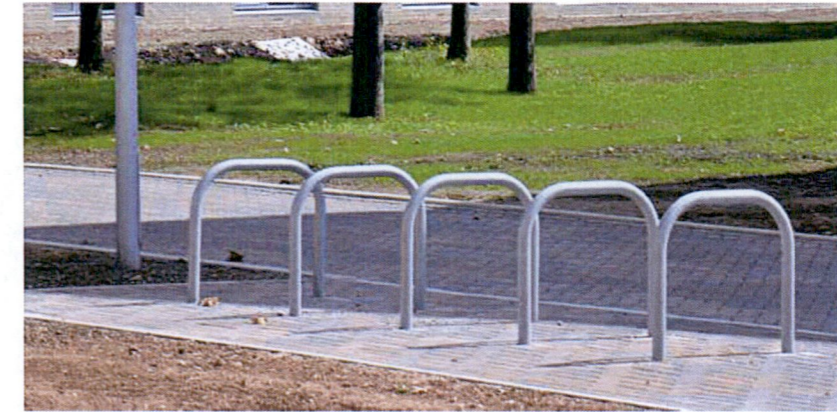
Concrete setts – granite effect to paths and traffic islands



Silver and Black Granite Coloured Pavers



Brushed Concrete to build out edges



Steel Sheffield Bike stand



Covered Bike Parking



Litter Bin

4.0 PLANTING

Planting has been designed to: create seasonal variety, provide screening, create an interesting setting for the shopping centre and to contribute towards the local biodiversity. Full details of plant species can be found on the drawings, and the operations, maintenance and management requirements are outlined in the following pages.

Street Trees – Typically 18-20cm girth:



Acer platanoides

Carpinus Betula 'Fastigiata'

Pyrus calleryana 'Chanticleer'

Proposed Parkland Specimen Trees – Typically 16-18cm girth:



Malus Tschonski

Amelanchier arborea 'Robin Hill'

Sorbus aucuparia

Proposed Parkland Specimen Trees – Typically 16-18cm girth:



Alnus glutinosa

Betula pendula

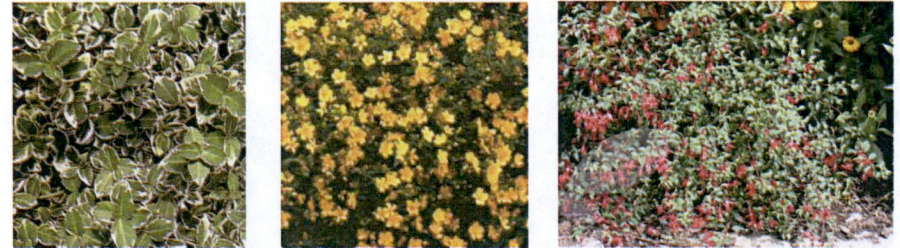
Shrubs - Ground cover and Ornamentals:



Aucuba japonica 'Variegata'

Calamagrostis Karl Foerster

Cercis canadensis 'Forest Pansy'



Euonymus fortunei

Hypericum 'Hidcote'

Fuchsia 'Riccartonii'



Ilex aquifolium

Lavandula angustifolia

Pachysandra terminalis 'Green Carpet'



Viburnum davidii

Viburnum opulus

Viburnum x burkwoodii

Hedges:



Fagus sylvatica



Prunus lusitanica



Viburnum opulus 'Roseum'

Green Roof:



Sedum spp. mix

Wildflower Meadow



Mixed native species

5.0 MAINTENANCE AND OPERATIONS

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
round or | Fences Specification for mild steel - low carbon steel - fences with square verticals and flat horizontals |

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.

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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 Extra Heavy Standard 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.

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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/m².
- 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 m²; and 150g/m² 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/m² and 10:10:10 NPK slow release fertiliser at 150g/m².
- 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.
- Maintain hedges at height indicated on drawings.

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.

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1.25 Grass Seeding**1.25.1 Herbicide Application**

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

1.25.2 Seedbed cleaning before sowing

Operations: Kill pernicious weeds with selective contact herbicide.

1.25.3 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 administrating 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.

1.25.4 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 Units 66&67nd 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.

1.25.5 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.

1.25.6 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/m², in transverse directions.

1.25.7 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.

1.25.8 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.

1.25.9 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.

1.25.10 Grass sowing season

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

1.26 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.

MAINTENANCE

Dunnes Stores Kilnamanagh Shopping Centre Extension

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 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.

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-Units 66&67 after each cut.

Lawn grass cutting shall be carried out every 10-14 days 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 24 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 2no. times per year to 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 and 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 15% 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 10-14 days 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 75mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

Weed Control

Areas of invasive and noxious species in lawns, shall be spot sprayed.

Weed infestations shall be reviewed in the context of the aesthetic and amenity functioning of the grass and if necessary controlled or eradicated.

Fertilizer

Approved fertilizer shall be applied 2no. times per year to 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 and Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

2.1.4 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 trimmer. 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 within 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

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 Watering

The Contractor will be responsible for the watering of all trees and shrubs during the maintenance period. Watering shall mean applying clean health water (chlorinated water accepted) to moisten the full depth of root run of each tree or shrub. Avoid washing or compaction of the soil surface. Any landscaping damage, discolouration or failing to show signs of healthy growth as a result of under watering will be replaced at the contractors cost.

The contractor will notification the Landscape Architect and keep a record of attendance for each visit. Spot checks will be made to ensure full compliance with this condition. It will be the Contractor's responsibility to source water for these applications. Additional watering may be required depending on weather.

The frequency of watering must be increased should the weather conditions turn excessively dry. It is the contractor's responsibility to monitor weather conditions to ensure the watering schedule is adjusted accordingly. It will be the responsibility of the Contractor to notify the Client of any additional requirements and agree the number of additional watering visits.

2.6 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.

2.7 Pest and Disease Control

The contractor will be responsible for maintaining the plants in a healthy and vigorous growth. Where disease, pest damage or fungi ingress is identified, the Contractor is to inform the Landscape Architect/ Client's Representative and agree treatment prior to application.

2.8 Tree Planting Care

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

2.8.1 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.

2.8.2. 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.

2.8.3 Existing Trees

The existing trees will have post remedial work to ensure their retention and protection during construction. All works to existing trees should be carried out in accordance with the Arborist's report.

2.9 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 Units 66&67nd 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).

2.11 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.

MAINTENANCE

Dunnes Stores Kilnamanagh Shopping Centre Extension

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
Grass cutting (Min 24 cuts)		*	*	**	***	***	***	***	***	**	*	
Rough Grass							*					
Fertiliser application to lawn grass areas.					*		*			*		
Hedge pruning/cutting					*			*			*	
Shrubs pruning and feeding				*		*			*			
Weed control of hedge and shrub planting areas		*	*	*	*	*	*	*	*	*	*	
Tree pruning											*	*
Removal of tree stakes (after 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 2 weeks of no rain)				*	*	*	*	*				
Application of residual weed killer to footpaths, cycle paths.				*								
Litter Clearance/pick up	*	*	*	**	***	***	***	***	***	**	*	*