Cabra PBSA

Landscape Report

On behalf of client: R & D Developments Limited (in Receivership), Grant Thornton

09.12.2025



Revision	Date	Description	Approved
-	15.07.2025	First Issue	DM
-	31.07.2025	Second Issue	DM
-	19.08.2025	Third Issue	DM
-	21.11.2025	Fourth Issue	DM
-	03.12.2025	Fifth Issue	DM
-	09.12.2025	Sixth Issue	DM

This document is to be read in conjunction with the following accompanying drawings:

DR-1000	Landscape Plan
DR-1001	Roof Garden

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Cabra PBSA

1.0 Existing Site Condition

Existing Site Condition

Cabra is an inner-city suburb located on the Northside of Dublin, approximately 2 km northwest of the city centre. The neighbourhood is well connected to central Dublin via the Luas Green Line (approximately 10-minute journey), multiple bus routes, and suburban rail services with stations at Broombridge and Pelletstown.

The site is situated on Faussagh Avenue, oriented longitudinally from south to north. It is bounded to the east by a residential area and to the west by a railway line.

On the southern end of the site lies a derelict structure, formerly a local pub Matts of Cabra, now in a state of ruin. The topography of the site rises from south to north, with the lowest elevation at 33 m located at the southeast corner, and the highest point reaching 40.06 m in the northern section, where the terrain forms a mound. This elevated area was created through infill, resulting in a sloping gradient towards both the east and west.

The southern boundary consists of the derelict building, access gates, and site hoarding. The western boundary along the Irish Rail line is defined by a tall palisade fence, which is supplemented by hoarding in certain areas. The northern boundary is marked by a light timber fence, while the eastern boundary, adjoining to residential properties, is primarily defined by a 2 m high blockwork wall or the backs of buildings.

The majority of the site is overgrown with meadow grass and other low vegetation. Denser shrub planting and brambles are present along the eastern and western edges. There are currently no trees on the site.



Aerial Photo of existing site and context.

Existing Site Condition


Site from Faussagh Ave


Site entrance from South


Site entrance looking North


Desafected building in the South of the site


Site boundary with the private dwelling, North

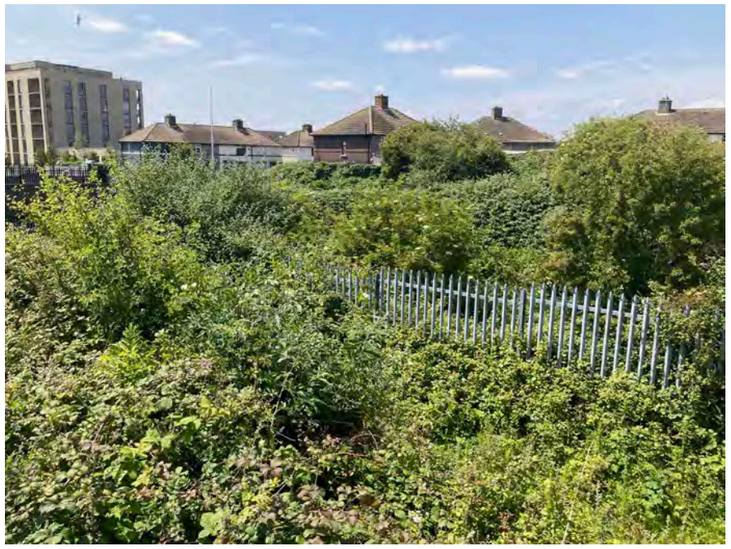

Site entrance looking East

Existing Site Condition

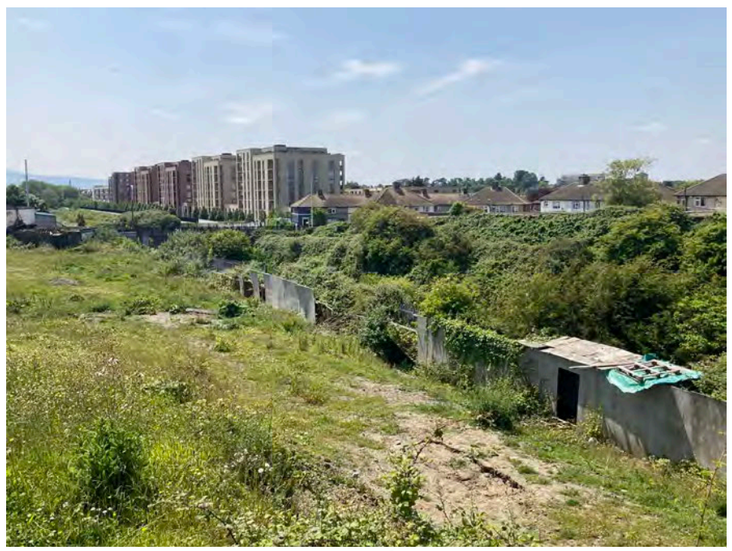

Site boundary with the private dwellings looking South-East


Site boundary with the private dwellings looking South-East


Site boundary with the private dwellings looking North-East


Site boundary with the Irish Rail looking West


Site boundary with the Irish Rail looking North-West


Site boundary with the Irish Rail looking South-West

Cabra PBSA

2.0 Landscape Strategy

Landscape Proposals

2.1 Design Overview

The project design is informed by the longitudinal character of the existing site and shaped by the functional, aesthetic, and experiential needs of future residents. The vision is to create a vibrant, joyful, and high-quality living environment for students, which also meets the expectations of short-term summer renters.

2.2 Public Realm and Access

To the south, a welcoming public space is proposed, featuring seating areas and pollinator-friendly planting schemes. These include a mix of ornamental flowering trees and selected specimen trees, enhancing biodiversity and seasonal interest. The terrain gently slopes up from Faussagh Avenue, allowing for vehicular access via a steeper central route, while pedestrian access is provided via two gentle gradients from the east and west.

A secured gate in the building undercroft serves as the primary access point to the communal open space. A designated DAC parking area is provided beside block A. The proposed commissioned artwork piece is located in the public space in the South of the site. The public open space serves as a vital component of the proposed development, enhancing the precinct's appeal and fostering a vibrant, active community environment..

2.3 Mobility and Transport

The scheme includes a generous provision for bicycle storage, comprising:

- 246 sheltered bicycle parking spaces (including 236 stacker units)
- 50 visitor bicycle spaces
- 12 cargo bicycle spaces

Service and emergency vehicle access is proposed along the eastern side of the site, terminating at the northern sports and activity zone, where a turning area is provided. To reduce the visual impact of this route, a section will be finished with reinforced grass, blending more seamlessly with the landscape. The DAC parking space is located on the east side, just beyond the secured gate, above the amenity building.

2.4 Communal Open Spaces

The communal areas are located behind the secured gate in the buildings undercroft and are organised into three distinct zones:

1. Arrival Zone (Center): A welcoming area with seating and extensive planting, creating a green and inclusive space.

2. Sports and Activity Zone (North): A dynamic space featuring a hang-out area, half basketball court, and on-ground large chess area. Surfaces will be finished in joyfully coloured, porous asphalt to enhance visual appeal and drainage.

3. Activity and relax garden (West): This area comprises a series of 'pocket gardens,' each with a distinct function. Some gardens offer sports activities such as table tennis, calisthenics, and an outdoor gym, while others provide social spaces for picnicking and BBQs, as well as more tranquil seating areas surrounded by lush planting.

All zones are connected by a distinctive 'red ribbon' pathway, finished in coloured porous asphalt.

2.5 Landscape - Biodiversity and SuDS

Currently, the site lacks tree coverage. To enhance biodiversity and improve the site's ecological value, the landscape proposal includes:

- Native hedgerows along the western and parts of the eastern boundaries
- Light-canopy native trees, such as birch, to provide screening along residential and railway boundaries
- Multi-stem flowering trees and ornamental shrubs in buffer planting zones adjacent to the apartment buildings
- Feature specimen trees and flowering species in central planted areas for visual impact
- A woodland sanctuary in the northern activity zone to strengthen biodiversity and provide a natural refuge

Mitigation measures to protect local fauna will be implemented throughout the project. These include lighting designed to minimise impacts on local wildlife and the installation of bat and bird boxes. For further details, please refer to the Ecological Impact Assessment by DNV and the Site Lighting Report by OCSC.

The permeability of the site will be enhanced through the use of permeable materials, including porous asphalt, reinforced grass, and natural permeable paving. These surface treatments will support sustainable drainage by allowing rainwater to infiltrate directly into the ground, reducing runoff and contributing to a more resilient landscape. In addition to permeable surfacing, a series of rain gardens is proposed throughout the site to further improve on-site water management. These landscaped features capture, slow, and filter surface water runoff, allowing it to be absorbed gradually into the ground while supporting a diverse palette of moisture-tolerant planting. The rain gardens contribute to reducing flood risk, improving water quality, and providing valuable ecological habitat.



Planters with the seating edge



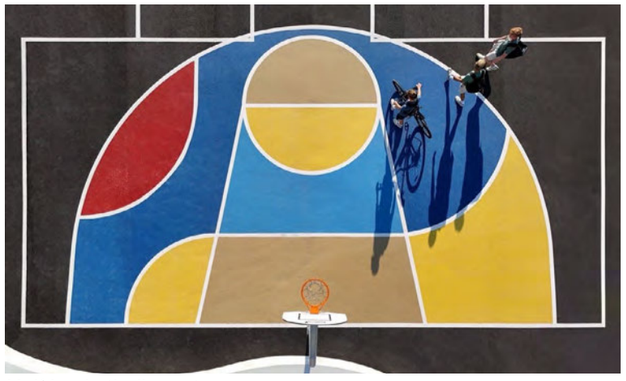
Idea of hard-wood seating



Sculpture in the public area



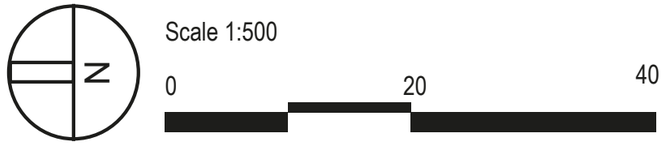
'Red ribbon' pathway



Half basketball court

Overall Site Plan





Roof Garden

2.6 Roof garden

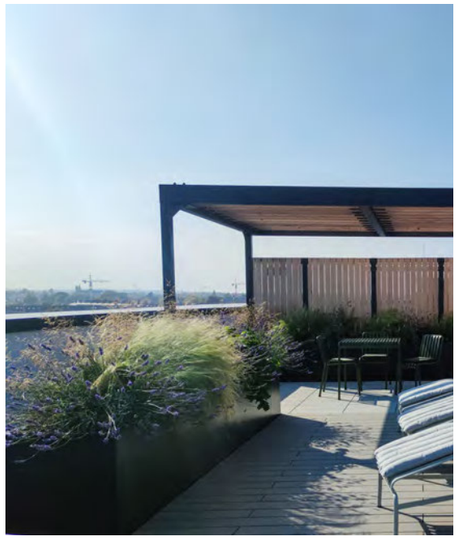
A high-quality and ecologically enhanced roof garden is proposed to provide an accessible outdoor amenity space for residents and visitors. The garden is designed to promote biodiversity, wellbeing, and social interaction, while contributing positively to the overall sustainability and visual quality of the development.

Raised planters featuring pollinator-friendly planting and small ornamental flowering trees are positioned along the perimeter of the roof garden, creating a soft green edge that enhances privacy and seasonal interest. Additional planters with a sensory mix of plants—selected for their texture, scent, and colour—are strategically placed throughout the space to enrich the user experience and encourage engagement with nature.

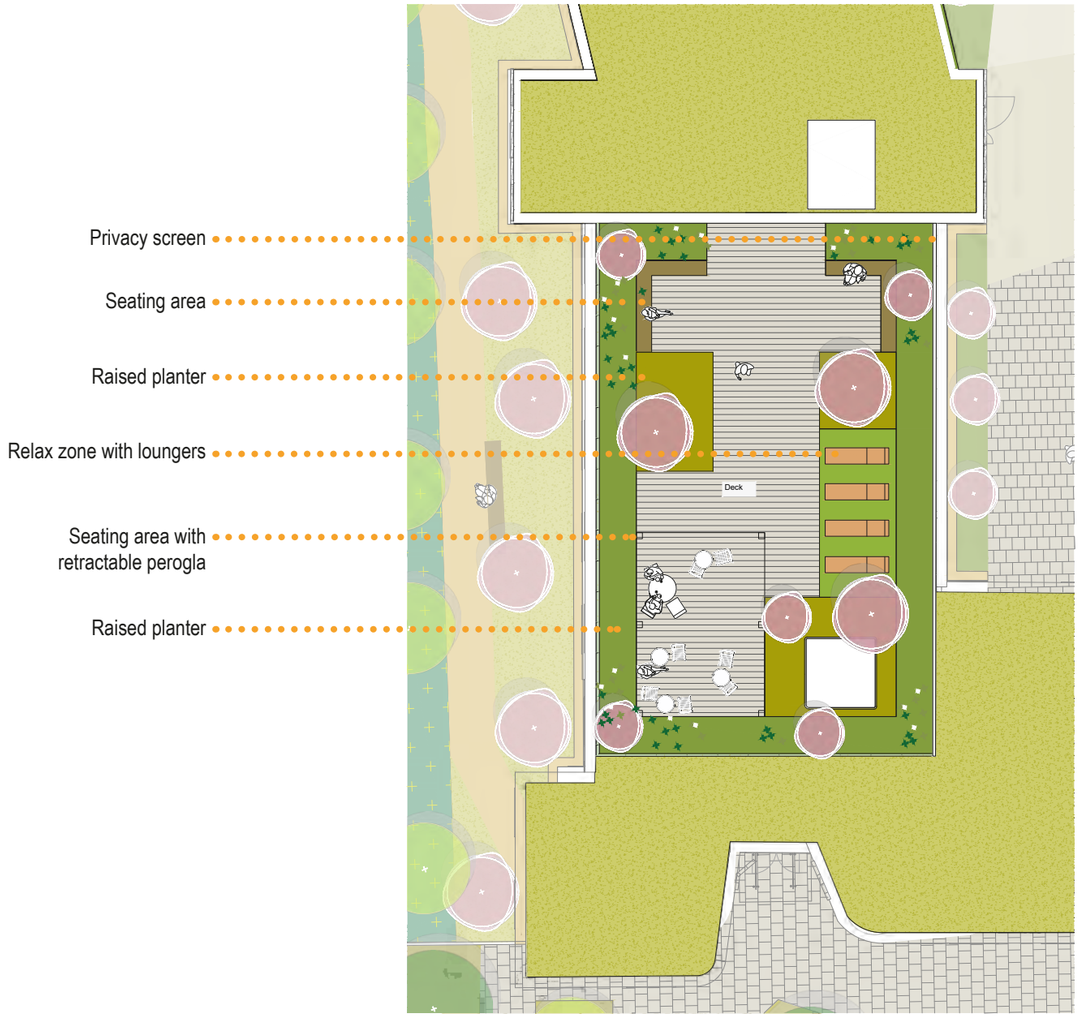
The roof garden includes a series of intimate seating areas designed for relaxation, informal gatherings, and quiet contemplation, including a retractible pergola covered seating area. In addition, a zone equipped with loungers provides opportunities for passive recreation and enjoyment of sunlight during warmer months. Together, these features create a vibrant, inclusive, and ecologically responsible outdoor space that enhances the overall livability and character of the development.











Roof garden scale 1:200

Area: 187 m2

Biodiverse Green Roofs



Biodiversity friendly roof - Meadow seeded

Roof garden

Total surface of biodiversity friendly roofs: 1426 m2

Scale 1:500

0 20 40

Public Open Space and Communal Open Space



Communal Open Space - 2971.4 m2

Public Open Space - 405.5 m2

Landscape sections





SECTION A-A scale 1:100

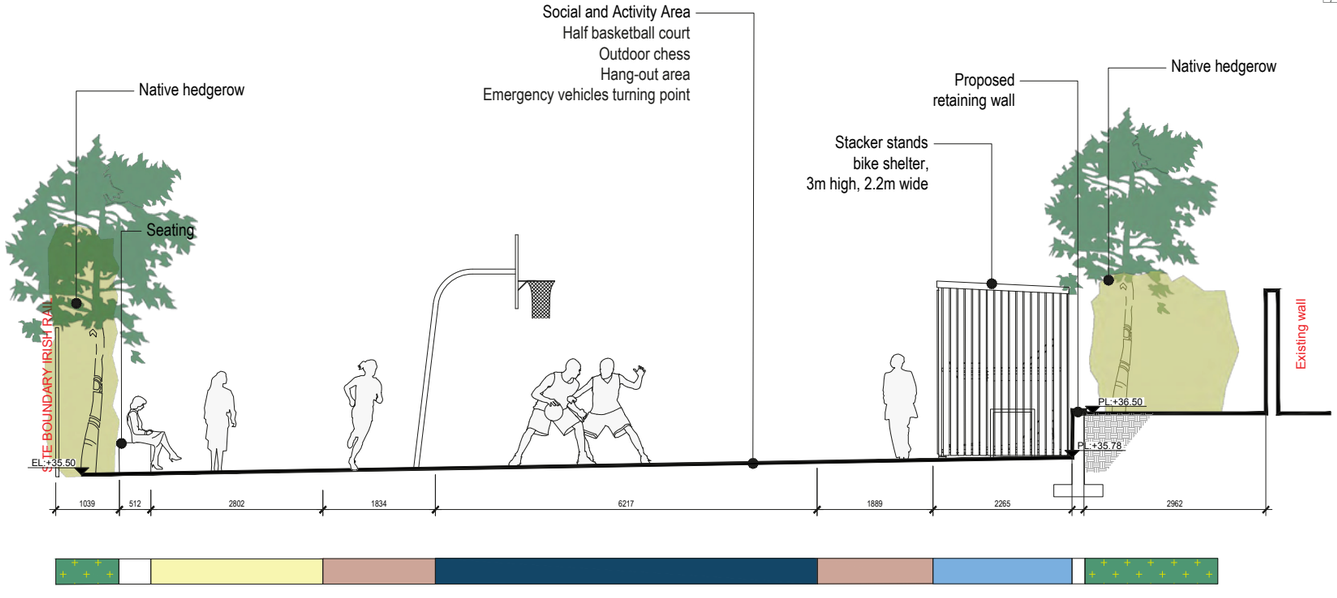
Landscape sections



SECTION B-B, scale 1:100

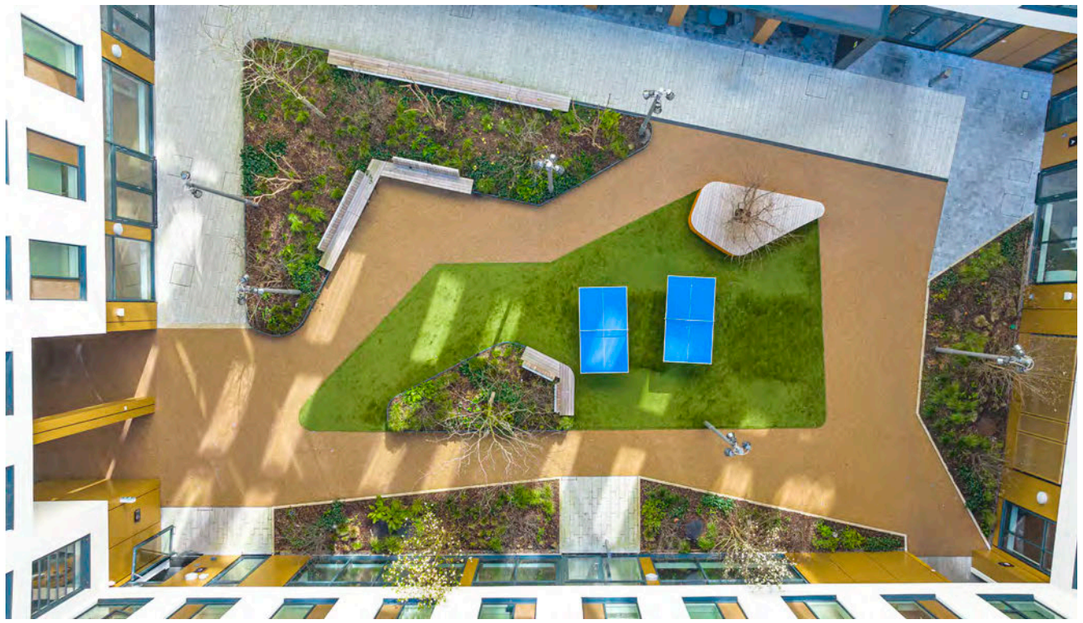
Landscape sections





SECTION C-C, scale 1:100

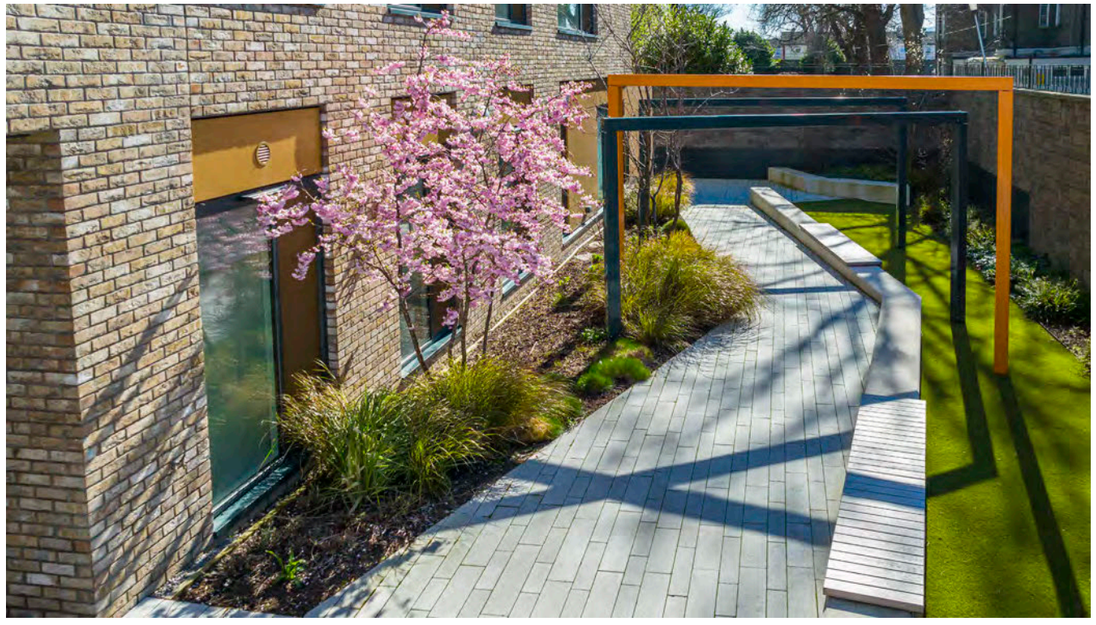
Reference Projects - From Here Student Accommodation, Cork St.



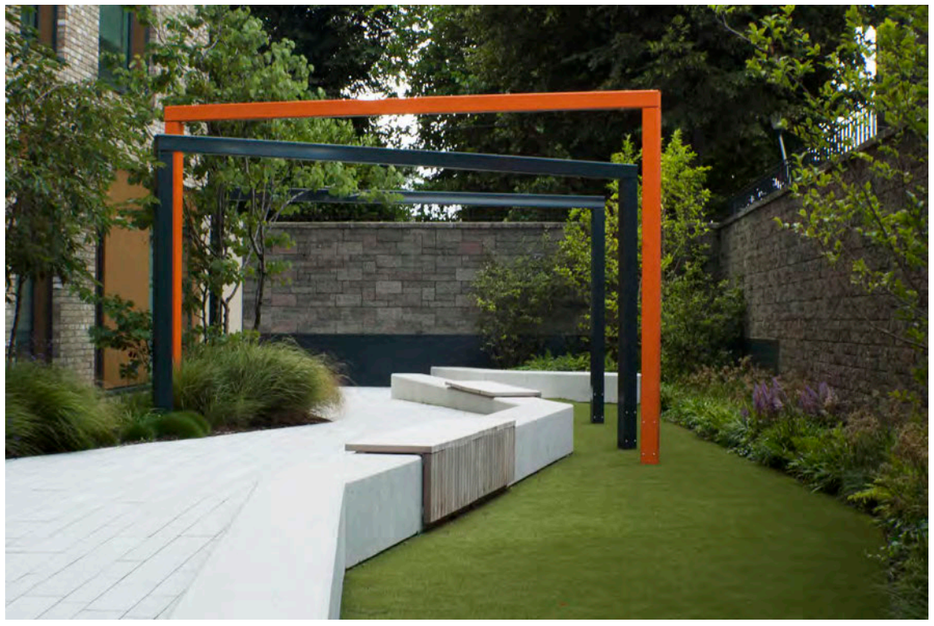
Central social space with planting, seating and table tennis.
Porous surfacing; resin bound gravel and artificial turf.



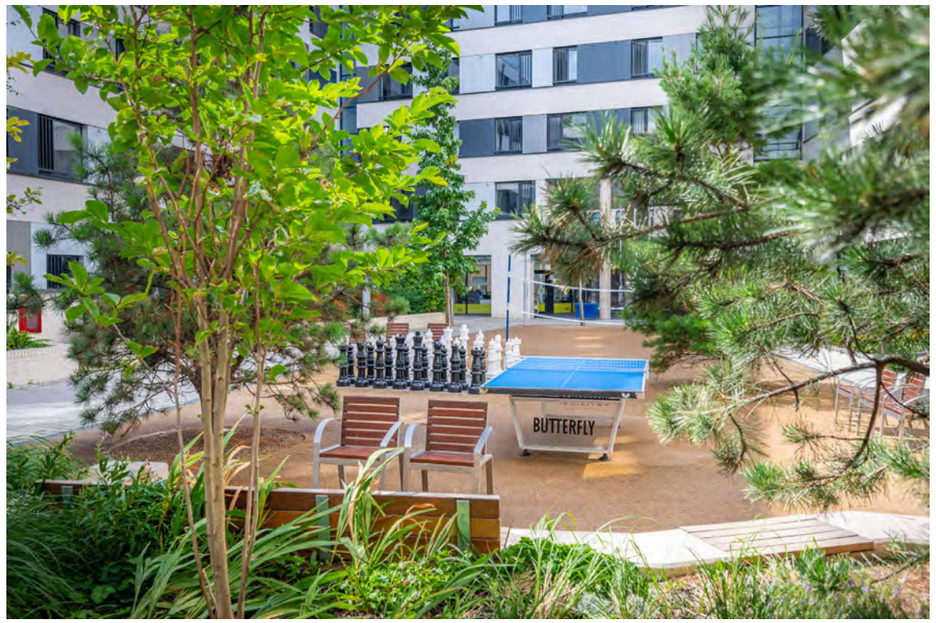
Roof terrace garden.



Linear space with seating, planting and pergola.



Reference Projects - Kavanagh Court, Student Residence, Gardiner St.



Social space with fixed and loose seating, planting, table tennis and chess.



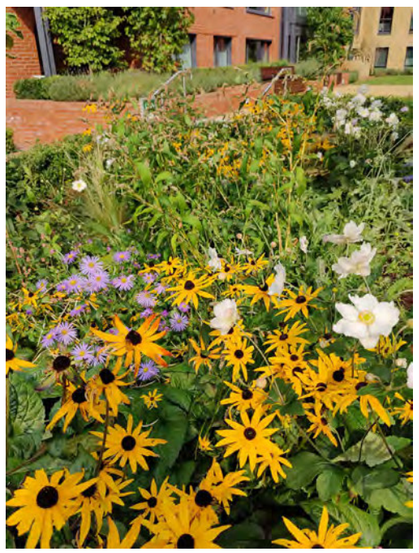
Porous surfacing; resin bound gravel and permeable paving.



Ambience - planting

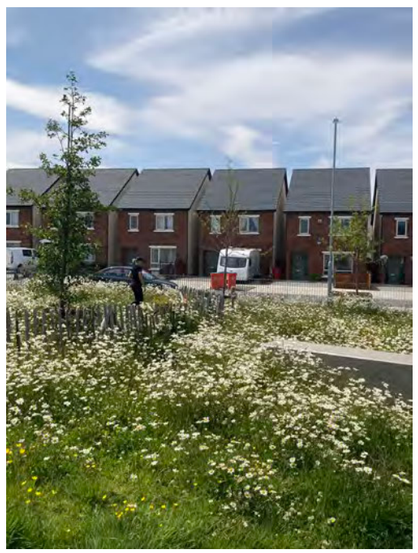


Pollinator friendly planting mix





Hedgerow planting, Weaver Park, Dublin 8





Spring flowering trees; *Amelanchier, Prunus*.



Birch copses.



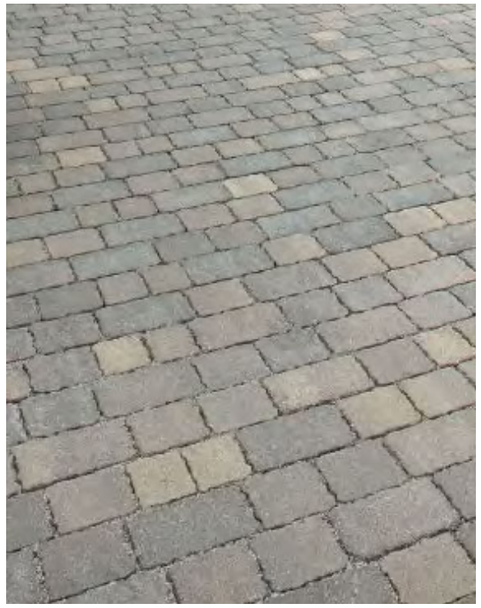
Pines for Winter interest.

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3.0 Hard Landscape Materials

Hard Landscape Materials

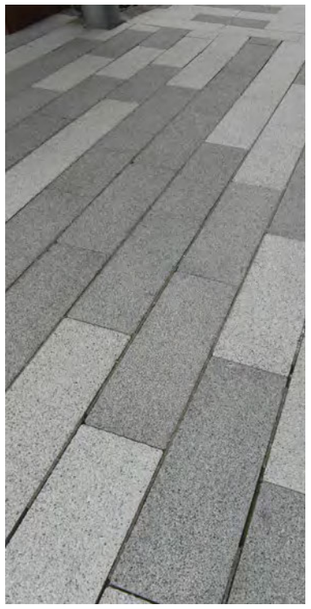
Paving/Surfaces



Permeable block paving



Reinficed grass fire tender access track to RHS of footpath, Donnybrook Gardens, Dublin.

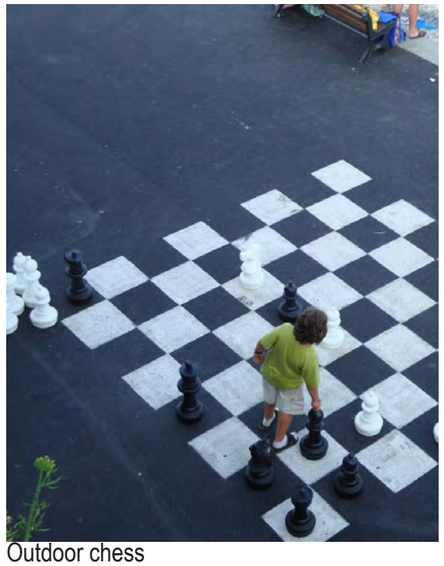


Natural stone paving (permeable)

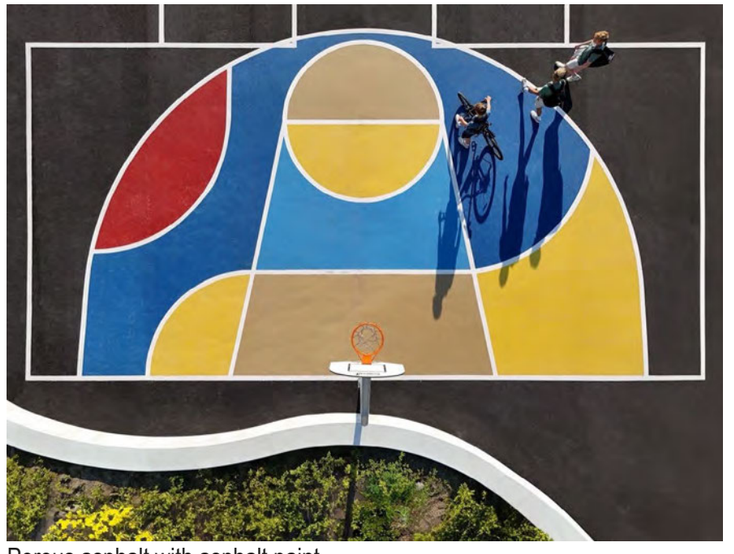




Resinbound gravel



Outdoor chess



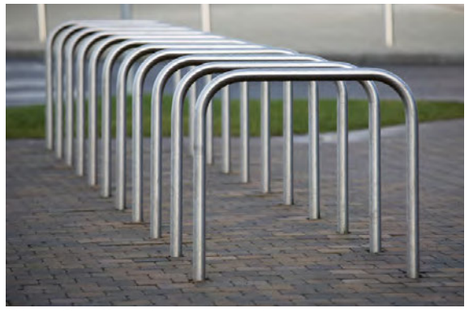
Porous asphalt with asphalt paint

Furniture - reference images



Seating and social space





Steel Sheffield type cycle stands.



Double stacker sheltered bicycle parking



Roof terrace - Screen



Roof terrace - Planters



Outdoor table tennis



Calisthenics and outdoor gym



DAC parking sign



Boundary treatment

2m Solid Roundbar Railing

Existing wall to be retained and made good

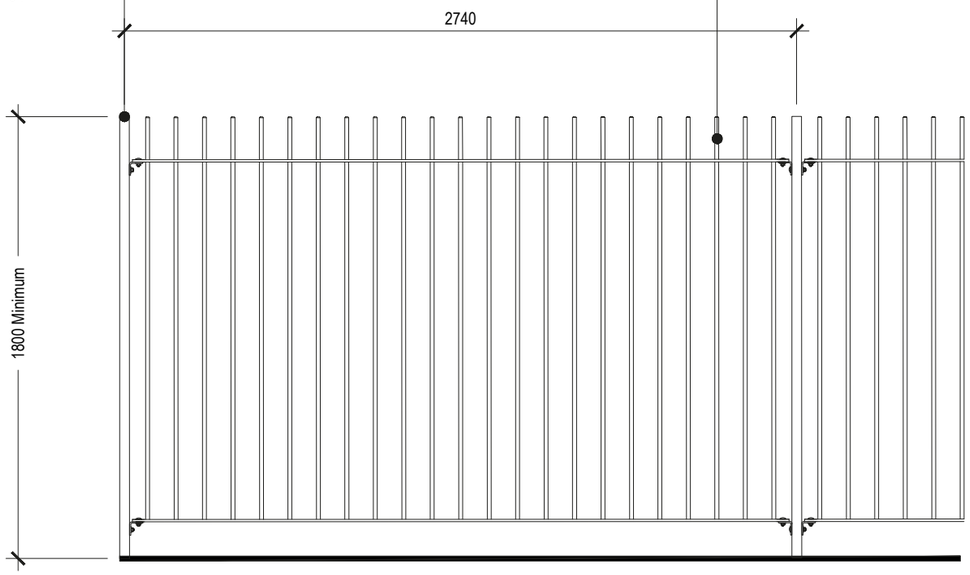


PLAN Scale 1:1000

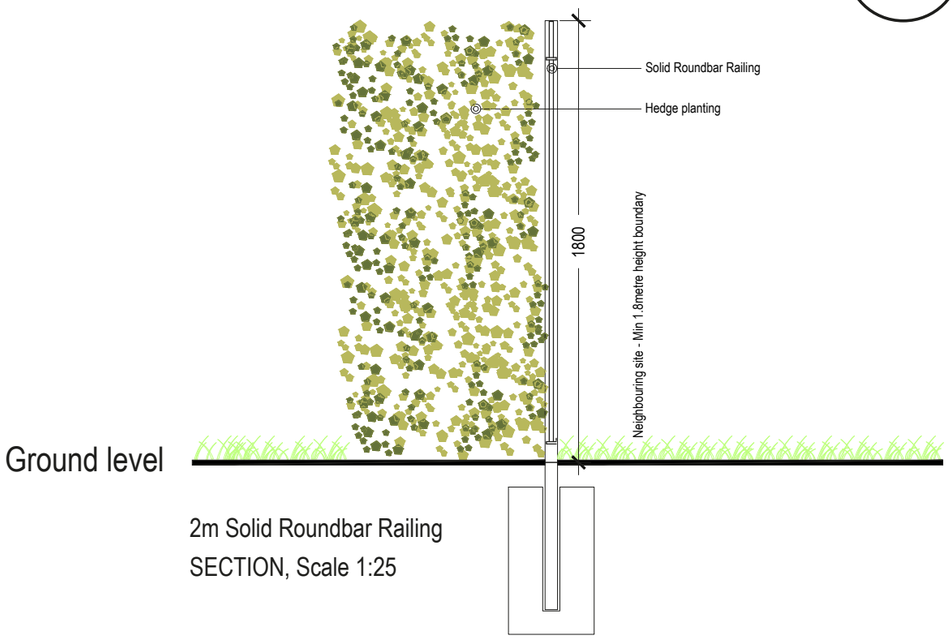
N

Post:
50 x 50mm hollow section with welded brackets in 6mm flatbar for mounting railing panels.

Horizontal bar:
8 x 50mm solid mildsteel flat bar.

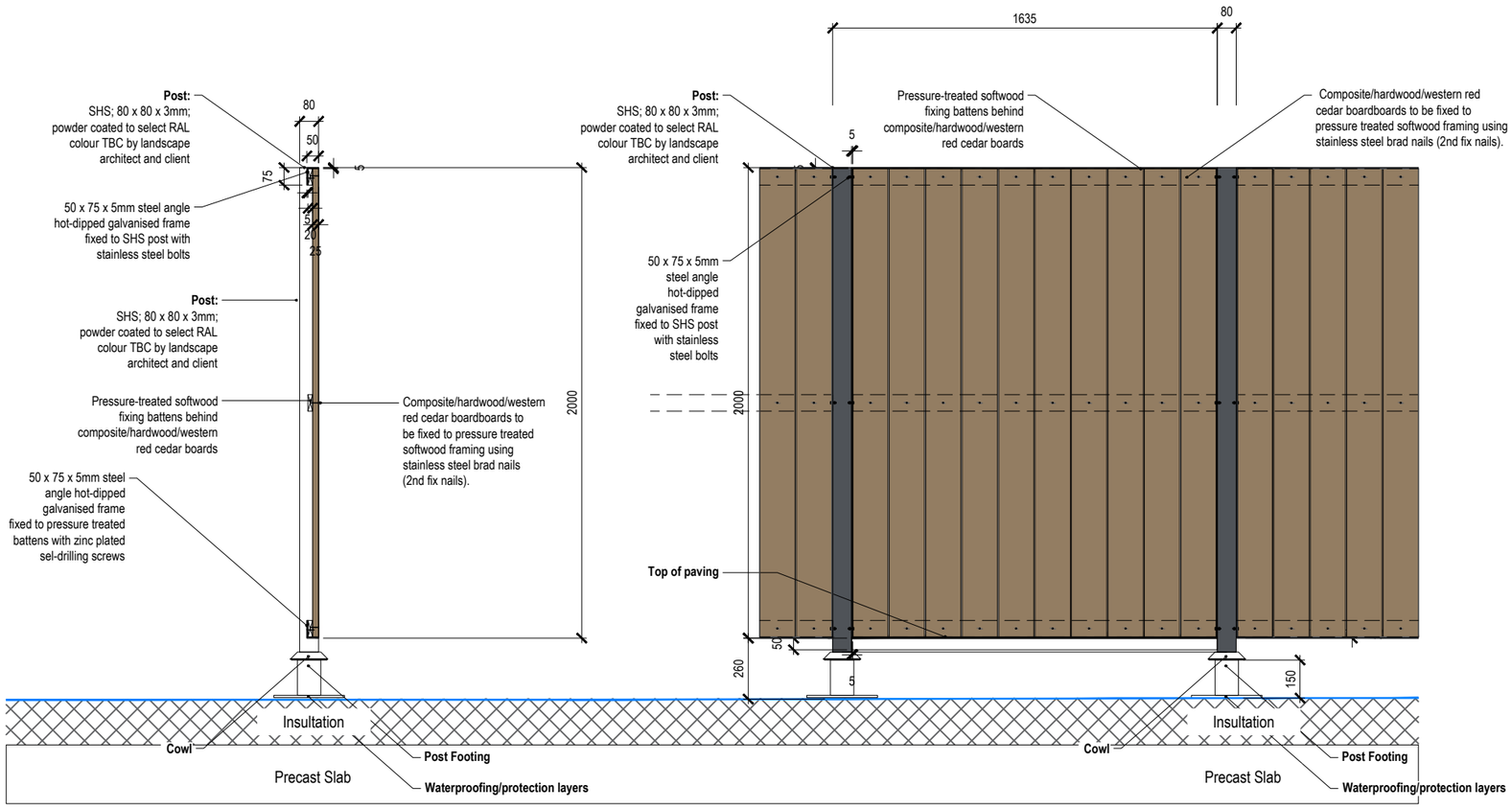


2m Solid Roundbar Railing
ELEVATION, Scale 1:25



2m Solid Roundbar Railing
SECTION, Scale 1:25

Screen - roof garden



Privacy Screen
SECTION, Scale 1:25

Privacy Screen
ELEVATION, Scale 1:25





Privacy Screen

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Cabra PBSA

4.0 Soft Landscape Materials

Soft Landscape Materials

Trees

Semi-mature clear-stem trees (avenue trees)

Ps *Pinus sylvestris*
Qr *Quercus robur*

18-20 cm g., wire rootballed, 2.0m clear stem, 5.0-6.0m high, 1.8m spread.

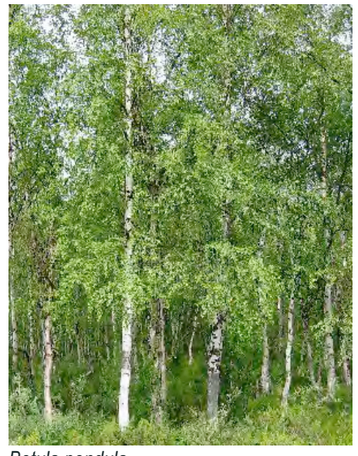
Screening trees and open space trees.

Bp *Betula pendula*
Bpu *Betula pubescens*
Pa *Prunus avium* (N)
Ps *Pinus sylvestris*
Qr *Quercus robur*

14-16 cm g., wire rootballed, 1.8m clear stem, 4.0-5.0m high, 1.5m spread.


Betula pubescens


Prunus padus


Betula pendula


Prunus avium


Pinus sylvestris


Sorbus aucuparia

Small flowering, ornamental and multi-stem trees

Al *Amelanchier lamarckii,* multi-stem, 3.0-3.5m high, 1.5m crown spread.
Aa *Amelanchier alnifolia* ‘Obelisk
Bp *Betula pendula,* multi-stem, 2.5-3.0m high, 1.5m crown spread.
Ca *Corylus avellana* (N), multi-stem, 2.5-3.0m high, 1.5m crown spread.
Cm *Crataegus monogyna* (N) 2.5-3.0m high, 1.5m crown spread


Amelanchier lamarckii


Cercidiphyllum japonicum

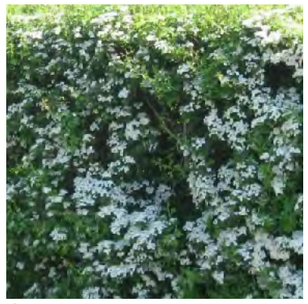

Crataegus monogyna

Native hedge

Planted at 500mm centres in a double staggered row, 0,9 - 1,2m. ht.

Plants list:
30% *Crateagus monogyna*
30% *Prunus spinosa*
20% *Ilex aquifolium*
10% *Euonymus europeus*
10% *Corylus avellana*




Crataegus monogyna


Prunus spinosa

Soft Landscape Materials

W Woodland

WX Mixed Native Woodland (1 per sqm)

WOODLAND PLANTING:
All bare roots whips or feathered 900-1800mm high.
Planted at 2.0 metre centres:

50%	Hazel	*Coryllus avellana*
30%	Hawthorn	*Crataegus monagyna*
10%	Scots Pine	*Pinus sylvestris*

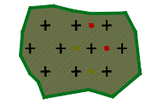
SHRUB LAYER:

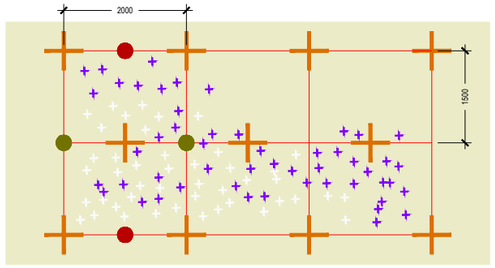
50%	Holly	*Ilex aquifolium*
50%	Guelder Rose	*Viburnum opulus*

BULB PLANTING:

Bluebell	*Hyacynthoides non-scriptus*
Wood Anemone	*Anemone nemorosa*
Wild Garlic/Ransoms	*Allium ursinum*

planted as bulbs, top size, 7 per sqm.





Over storey and dominant species: feathered, 1500-1800mm h., br.

Under storey and minor species, planted in clumps to the edge of woodland groups: feathered/whips 900-1500mm h., br.

Bulb Planting

Over storey and dominant species:
feathered, 1500-1800mm h., br.

Under storey and minor species, planted in clumps to the edge of woodland groups:
feathered/whips 900-1500mm h., br.

NOTES ON MANAGEMENT:+ 2

Year 1 + 2

Maintain weed free abse to each tree; 200-300mm radius by hand weeding or using a proper non-harmful and glyphosate free herbicide. Spraying to be undertaken post May and/or when bulb foliage has died back.

Ensure all tree stakes and ties are secure. Ensure all staked trees are upright and adjust if necessary.

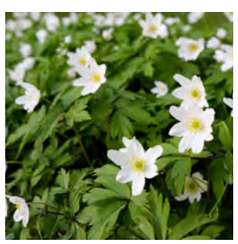
Year 3

Remove all tree stakes and ties.


Coryllus avellana


Pinus sylvestris


Hyacynthoides non-scriptus


Anemone nemorosa


Allium ursinum


Ilex aquifolium

Pollinator and Biodiversity Friendly Evergreen Hedging

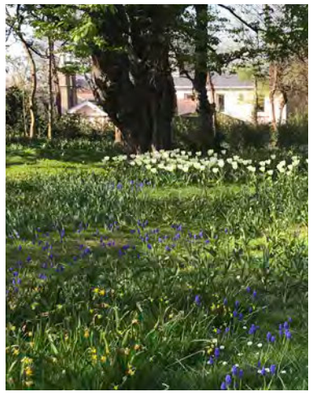
Holly	*Ilex aquifolium*
Yew	*Taxus bacatta*

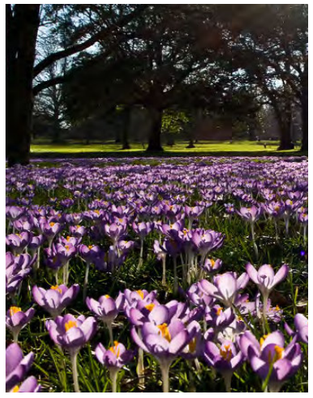



Ilex aquifolium

GB Spring Bulbs and grassland

The majority of the bulb species and varieties selected below are recognised as being pollinator friendly and therefore of benefit to local populations of nectar eating insects such as Bees and Butterflies.
Sow as bulbs in October through seeded verges or planting beds. Leave foliage uncut for a minimum of 3 weeks after flowering. Can be left longer if mixed with later flowering species. Remove arisings.





Bulbs:
Shade tolerant mix of bulbs for around the base of trees:

Wild Garlic	Allium ursinum
Wood Anemone	Anemone nemerosa
Snowdrop	Galanthus nivalis
Bluebell	Hyacinthoides non scriptus

Open aspect:

Allium	Allium ‘Gladiator’
	Allium ‘Purple Sensation’
	Allium ‘Mount Everest’
Crocus	Crocus c.vars.; white, lilac and purple
flowering varieties.	
Autumn Flowering Crocus	Crocus sativus
Fritillary	Fritillaria meleagris
Grape hyacinth	Muscari aremeniacum
Dwarf daffodils	Narcissus ‘Tete a tete’

Native Grasses:

Creeping Bent	Agrostis stolonifera
Crested Dogstail	Cynosurus cristatus
Meadow Fescue	Festuca pratensis
Sheeps Fescue	Festuca ovina
Slender Red Fescue	Festuca rubra
Timothy	Phleum pratense
Smooth Stalked Meadowgrass	Poa pratensis

Wg Woodland Garden Planting Mix

Majority of the plants listed on All-Ireland Pollinator Plan 2015-2020, Pollinator Friendly Planting Code or the RHS Plants for Pollinators.

Perennials:
Asarum europaeum
Anemone hupehensis
Aenmone x hybrida
Digitalis purpurea
Galium odoratum
Luzula nivea
Luzula sylvatica
Vinca minor

Ornamental Ferns; for mid-Winter interest, max. 30% of any planted area:
Blechnum spicant
Dryopteris affinis
Polstichum setiferum

Bulb Underplanting
Anemone nemerosa (N)
Galanthus nivalis
Hyacinthoides non-scriptus (N)



Dryopteris affinis



Asarum europaeum



Galium odoratum



Luzula nivea

Soft Landscape Materials

P Pollinator Planting

PF Full Sun

Majority of the plants listed on All-Ireland Pollinator Plan 2015-2020, Pollinator Friendly Planting Code or the RHS Plants for Pollinators.

Perennials:
Centaurea atropurpurea
Echinops bannaticus
Erigeron karvinskianus
Erysimum 'Bredon'
Geranium 'Rozanne'
Geranium 'Johnson Blue'
Knautia macedonica,
Nepeta 'Kit Kat'
Pulmonaria officinalis
Rudbeckia fulgida 'Goldstrum'
Salvia nemerosa
Stachys byzantina

Ornamental Grasses and Sedges; for mid-Winter interest, max. 30% of any planted area:
Carex elata (N)
Deschampsia cespitosa
Helictotrichon sempervirens
Molinia Caerulea (N)
Sesleria autumnalis

Bulb Underplanting
Allium c.vars
Narcissus c.vars
Tulipa c. vars





Helictotrichon sempervirens



Allium 'Christophii'



Knautia macedonica



Rubeckia fulgida 'Goldstrum'

G Meadow and Grassland

GL1 Low Sward Meadow

Suitable for occasional cutting (every 6 weeks approx. from March – October). Suitable for roadside verges as sightlines for traffic safety can be maintained. Leave sward uncut during month of May. Verges can be seeded with a wildflower / grass mix of native species. Remove arising with each cut.

Ratio of Wildflower to Grass Seed; 70:30. Sowing rate 2gr / m2 approx.

Wildflowers:	
Lady's Bedstraw	*Galium verum*
Bugle	*Ajuga reptans*
Meadow Buttercup	*Ranunculus acris*
Wild Chamomile	*Chamaemelum nobile*
Red Clover	*Trifolium pratense*
Cowslip	*Primula veris*
Oxeye Daisy	*Leucanthmeum vulgare*
Smooth Hawksbit	*Leontodon saxatilis*
Ribwort Plantain	*Plantago lanceolata*
Quaking Grass	*Briza media*
Selfheal	*Prunella vulgaris*
Sorrel	*Rumex acetosa*
Birsdfoot Trefoil	*Lotus corniculatus*
Yarrow	*Achilliea millefolium*
Kidney Vetch	*Anthyllis vulneraria*

Native Grasses:	
Creeping Bent	*Agrostis stolonifera*
Crested Dogstail	*Cynosurus cristatus*
Meadow Fescue	*Festuca pratensis*
Sheeps Fescue	*Festuca ovina*
Slender Red Fescue	*Festuca rubra*
Timothy	*Phleum pratense*
Smooth Stalked Meadowgrass	*Poa pratensis*

Bulb Mix (5 bulb types combined in equal proportions, planted 25 bulbs / m2)
20% *Allium species,* 20% *Crocus*, 20% *Galanthus*, 20% *Narcissus*, 20% *Scilla*

Bulb coverage: 25% of total area






Oxeye Daisy


Red Clover


Yarrow

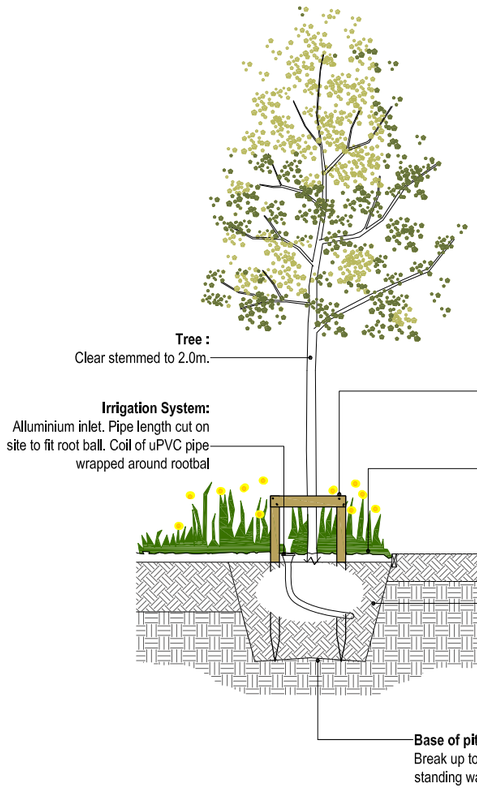

Cowslip


Selfheal

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Cabra PBSA

5.0 Soft Landscape Details



Tree :
Clear stemmed to 2.0m.

Irrigation System:
Alluminium inlet. Pipe length cut on site to fit root ball. Coil of uPVC pipe wrapped around rootbal

Tree support:
Double stake with cross bar. Stake75mm Ø, 1500mm long min, machined and rounded. All timber to be pressure treated. All nails to be galvanised. Tree stem strapped to cross bar with 1no. 'Holdfast Rubber Block' HB3 90 x 75 x 40mm and 50mm wide 'Holdfast Natural Tree Belting'. Available from www.greentech.co.uk or similar approved.

Tree Pit Surface:
75mm medium grade bark chip by Enrich.ie or similar approved, no splinters or fines.

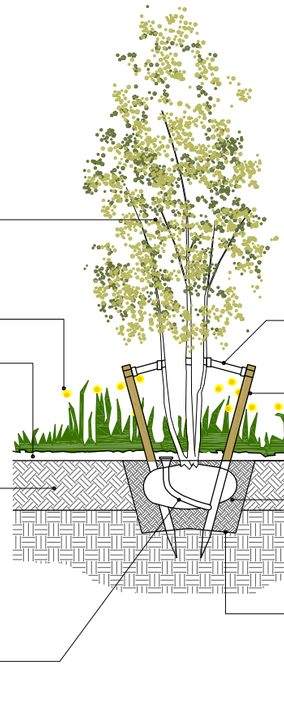
Growing medium:
Pit backfilled with min 900mm topsoil/compost mix, 3:1.
Compost: *Multipurpose Organic Compost*, available from www.enrich.ie or similiar approved.

Base of pit:
Break up to ensure free drainage and no standing water.

Semi-mature and Heavy Standard tree planting in soft landscape

scale 1:50

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Tree

Groundcover/Shrub planting

Mulch:
Apply a 75mm deep layer of mulch to all planting beds; Medium Grade Bark Chip by Enrich Environmental (www.enrich.ie) or similiar approved.

Topsoil:
Topsoil to be drawn from existing stockpiles on site. Work in 100mm depth of *Multipurpose Organic Compost*, available from www.enrich.ie or similiar approved. Cultivate the planting beds to a min. depth of 450mm with three passes of a rotivator.

Irrigation System:
Alluminium inlet. Pipe length cut on site to fit root ball. Coil of uPVC pipe wrapped around rootbal

Tree Tie:
6no. 'Holdfast Rubber Block' HB3 90 x 75 x 40mm. 50mm wide 'Holdfast Natural Tree Belting'. Available from www.greentech.co.uk or similar approved.

Tree Stake:
3no. 1800 x 75mmØ machined and rounded. pressure treated softwood.

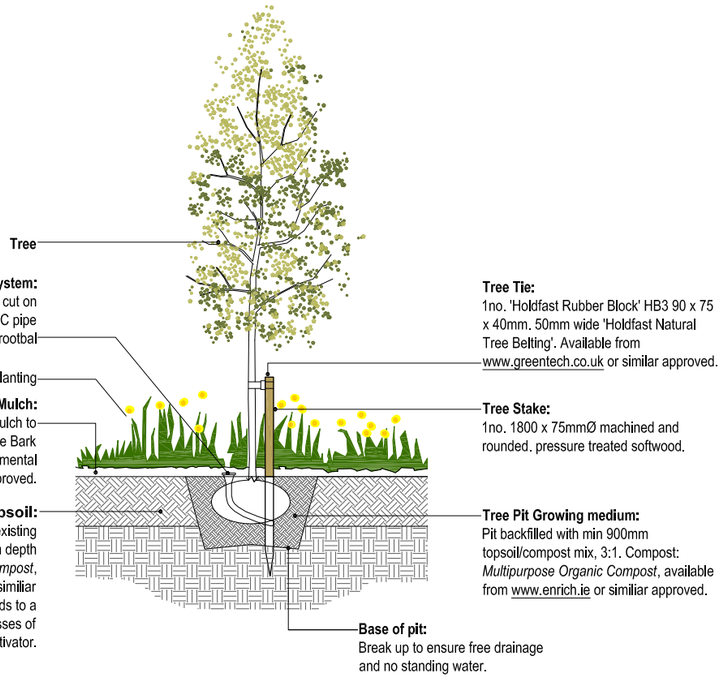
Tree Pit Growing medium:
Pit backfilled with min 900mm topsoil/compost mix, 3:1. Compost: *Multipurpose Organic Compost*, available from www.enrich.ie or similiar approved.

Base of pit:
Break up to ensure free drainage and no standing water.

Multi-stem Tree Planting

scale 1:50

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Standard and Feathered Tree Planting In soft landscape

scale 1:50

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Soil growing medium:
Lightweight Roof Soil by Enrich.ie or equivalent matching below specification:

- 25% General Purpose Compost or similar and approved peat free soil ameliorant:
- 10% LECA:
- 65% virgin premium grade free draining sandy loam with pH 5.5-7.8, (55% SAND, 30% SILT, 15% CLAY, to BS 3882).
- Finely screened with no lumps
- Grain size 0-20mm
- Dry weight $\geq$ 0.9g/cm^3
- Saturated Weight $\geq$ 1.2t/cm^3
- pH 6.9-7.9
- Organic Content 10-25% by mass
- Permeability 25%
- Peat free

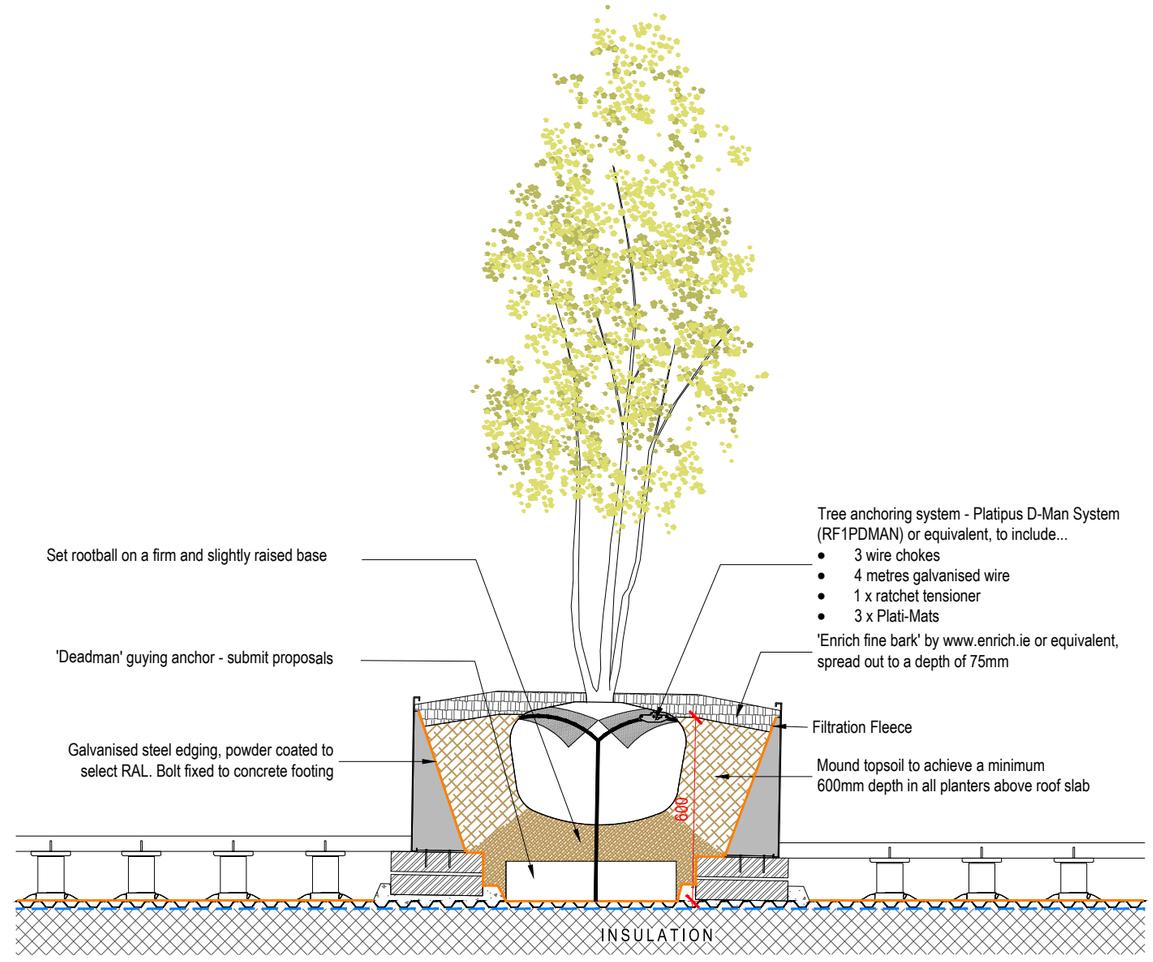
Produced to BS 3882 quality standard.

Drainage Board and Filter Fleece

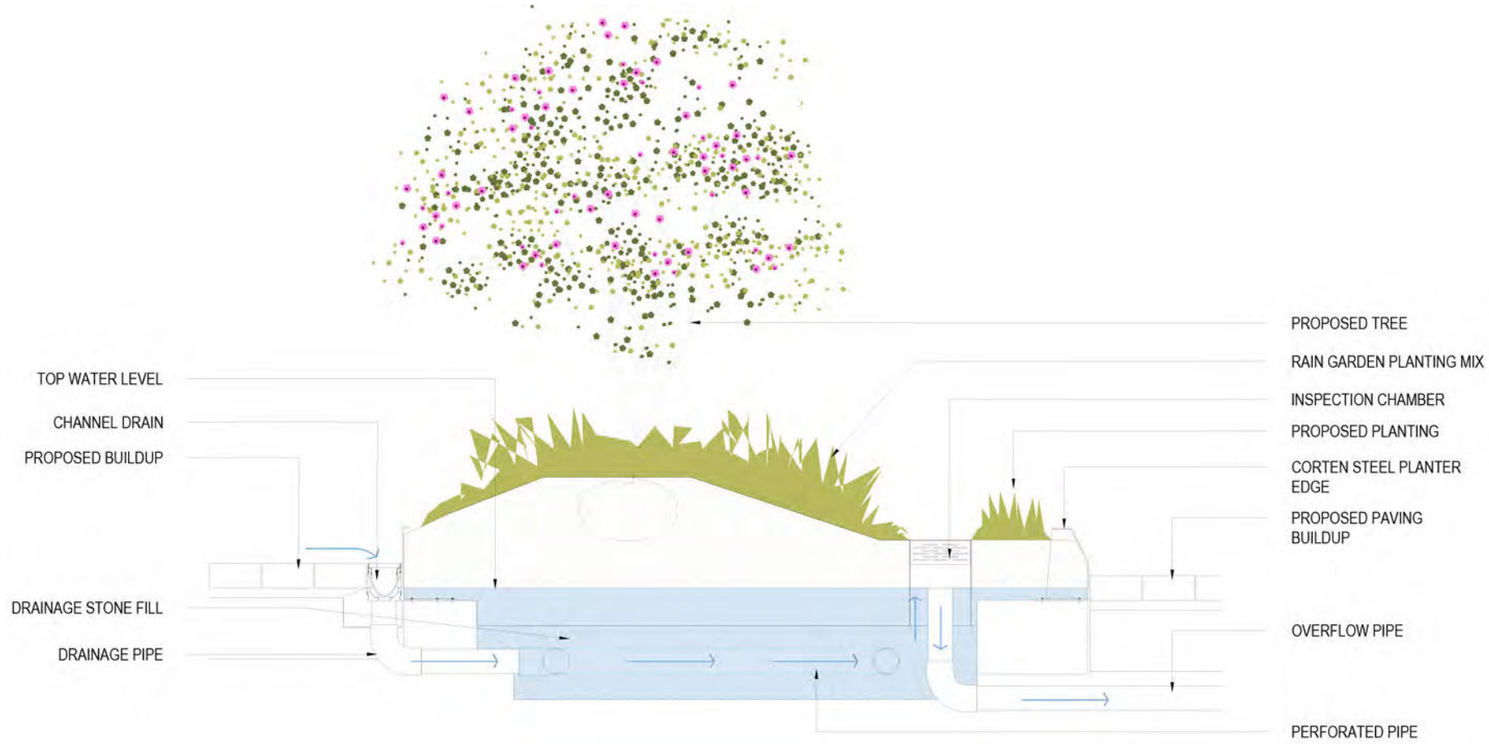
- Filtration Fleece - VLF-200 by Moy Materials or equivalent - planters lined in filter fleece up to mulch level as illustrated

over

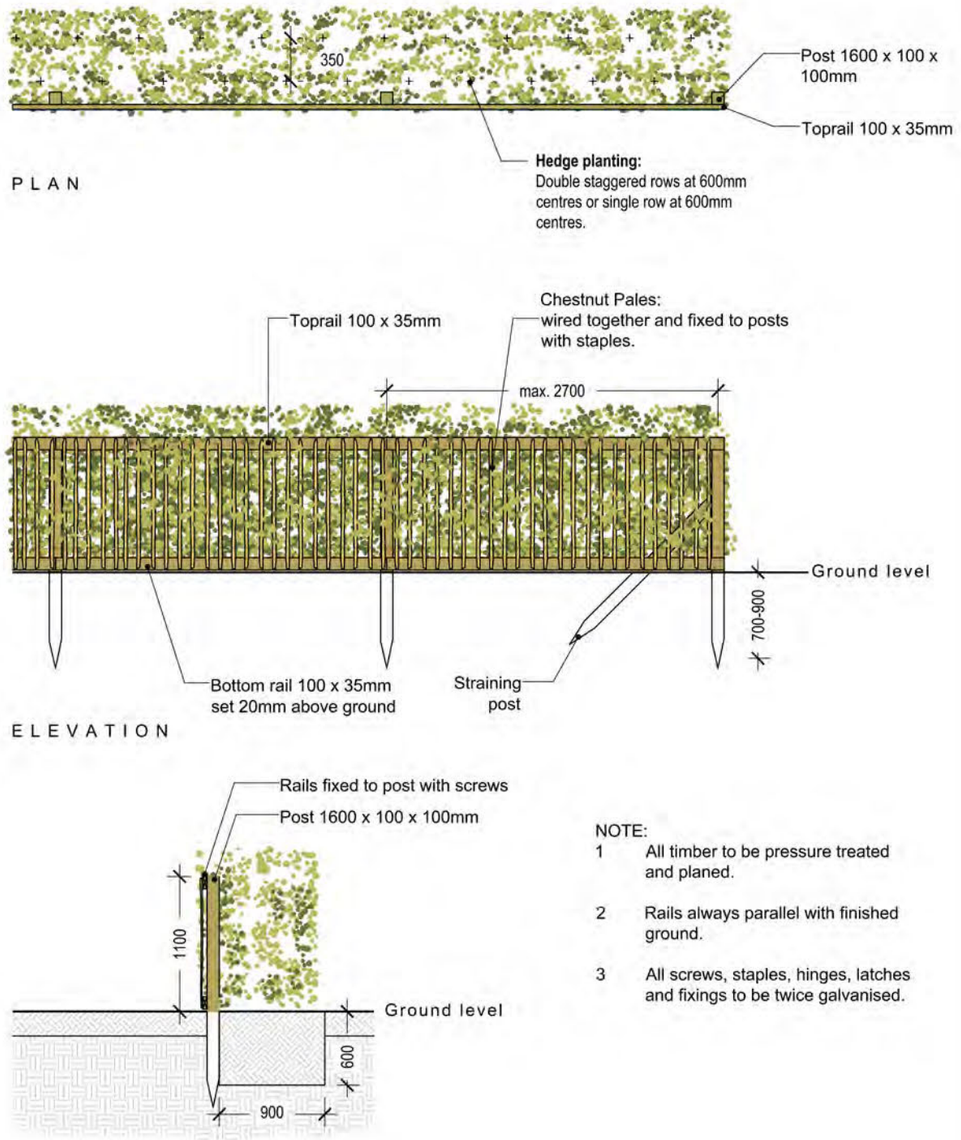
- 60mm Drainage Board - DiaDrain 60H by Moy Materials or equivalent



Tree Planting Over Roof Terrace, scale 1:20



Rain Garden, scale 1:20



NOTE:

1 All timber to be pressure treated and planed.

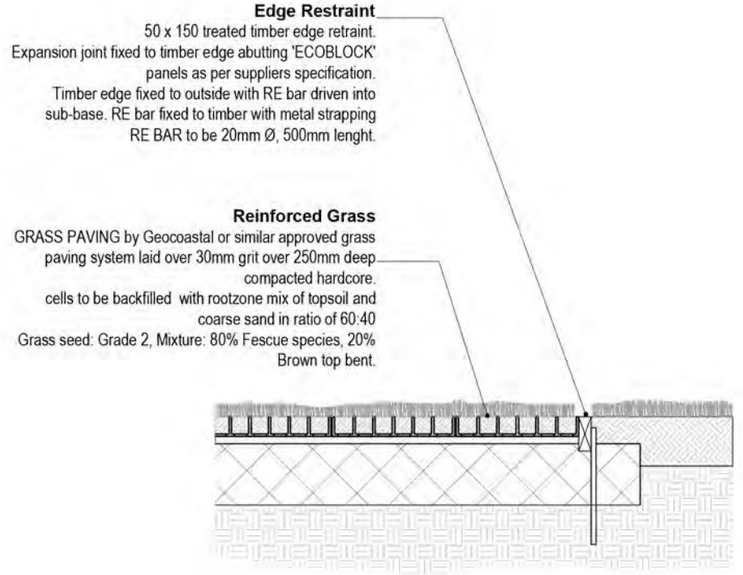
2 Rails always parallel with finished ground.

3 All screws, staples, hinges, latches and fixings to be twice galvanised.

Hedge planting

scale 1:50

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Reinforced Grass - Access Road / Car Parking

scale 1:25

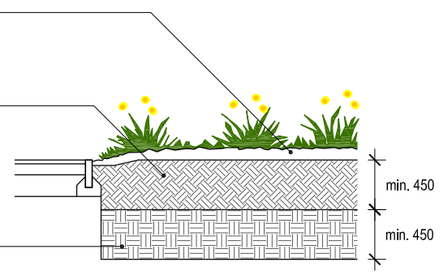
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Groundcover Planting

Mulch:
Apply a 75mm deep layer of mulch to all planting beds; Medium Grade Bark Chip by Enrich Environmental (www.enrich.ie) or similiar approved.

Topsoil:
Topsoil to be drawn from existing stockpiles on site. Work in 100mm depth of *Multipurpose Organic Compost*, available from www.enrich.ie or similiar approved. Cultivate the planting beds to a min. depth of 450mm with three passes of a rotivator.

Subsoil:
Rip subsoil to a depth of min. 750mm from finished surface. Min. depth of subsoil 450mm.

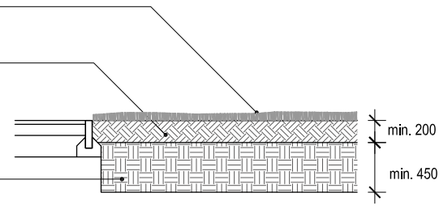


Lawn

Grass Seeding:
Area to be grass seeded. Grade 2, Mixture: 80% Fescue species, 20% Brown top bent.

Topsoil:
Topsoil to be drawn from existing stockpiles on site. Cultivate grass seeding areas to a min. depth of 300mm with three passes of a rotivator.

Subsoil:
Rip subsoil to a depth of min. 600mm from finished surface. Min. depth of subsoil 450mm.



Gravel trim building facades

NOTE:
- All timber to be pressure treated Larch.
- Double stakes at change of direction and corners.
- All nails to be twice galvanised.

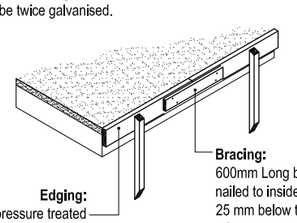
Gravel trim:
min. 300mm depth layer of 10-20mm washed and graded pebble.

Timber edging: see adjacent detail

Soft landscape

Topsoil

Subsoil



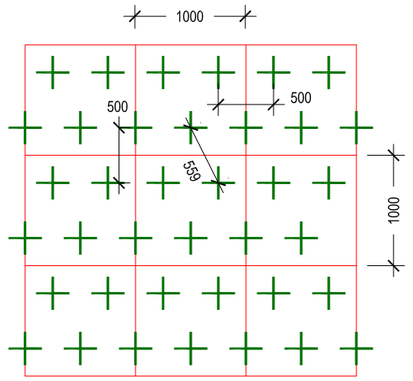
Edging:
150 X 40mm pressure treated Larch timber edge twice nailed to 50 X 50 X 750mm stakes driven at 1200 centres.

Bracing:
600mm Long bracing at joints nailed to inside of timber edge, 25 mm below top of timber edge.

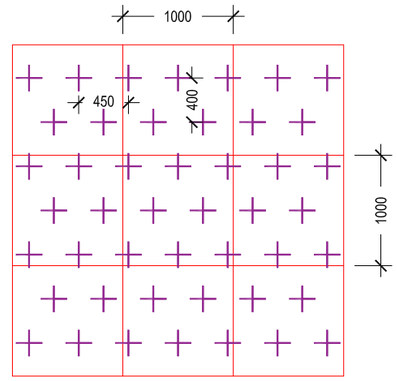
Groundcover planting beds, lawn and gravel trims

scale 1:50

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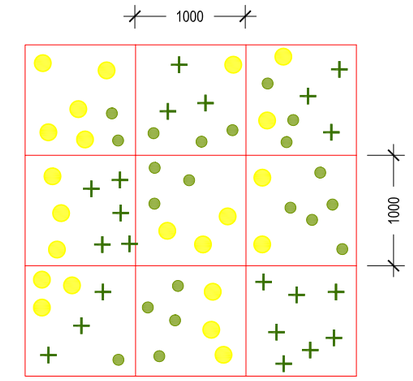


Clipped shrubs:
Density of plants typically 4 per sqm, all 2ltr cg. min.



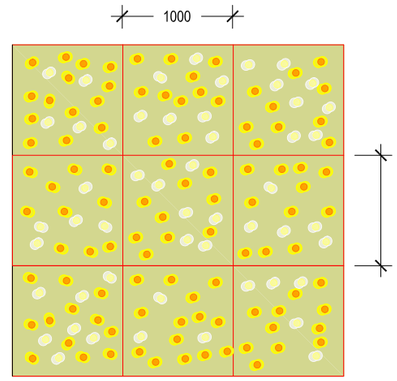
Groundcover shrubs:
Planted at 5 per sqm, all 2ltr cg. min.

Clipped Planting - Taxus, Buxus



Groundcover - mix of grasses and perennials:
Density of plants typically 7 per sqm, all 2ltr cg. min.
Plants to be mixed randomly in clumps of 3-9.

Groundcover Mixes



Density of bulbs typically 15-20 per sqm.

Bulb drifts in grass

Setting out - clipped shrub planting, groundcover planting and bulbs

scale 1:50

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Cabra PBSA

6.0 Soft Landscape Specification

D20 Excavating and filling

To be read with Preliminaries/General conditions

CLEARANCE/EXCAVATING

164 TREE ROOTS
- Protected area: Do not cut roots within precautionary protection area.
- Size of area: As shown on Áit drawings.
- Excavation in protected area:
- Method: By hand.
- Backfill as soon as possible or temporarily line with polyethylene sheet to reduce evaporation.
- Outside protected area: Give notice of roots exceeding 25 mm and do not cut without approval.
- Cutting:
- Make clean smooth cuts with no ragged edges.
- Pare cut surfaces smooth with a sharp knife.
- Treatment of cut roots: Not required.
- Backfill: As dug material, enriched with amelioration as section Q31.

166 TREE ROOT BARRIERS
- Trench: Sever all roots.
- Depth: As per Áit drawings.
- Root barrier: REROOT 2000, 2mm thick, 600mm deep, by Greenleaf.
- Cutting roots: As clause 164.
- Root barrier installation: Full depth of excavation. Fit closely to trench wall nearest the tree.
- Backfill material: As dug material excavated from trench.
- Backfilling: Lay and compact thoroughly in layers not more than 300 mm thick.

168 SITE CLEARANCE
- Timing: Before topsoil stripping, if any.
- General: Clear site of rubbish, debris and vegetation. Do not compact topsoil.
- Treatment: Apply a suitable non-residual herbicide to areas where; topsoil is to be excavated for re-use and existing soft landscape areas to be planted, seeded or turfed.

170 REMOVING SMALL TREES, SHRUBS, HEDGES AND ROOTS
- Identification: Clearly mark trees to be removed.
- Small trees, shrubs and hedges: Cut down
- Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas
- Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group safety leaflets.

175 FELLING LARGE TREES
- Definition: Girth over 600 mm.
- Identification: Clearly mark trees to be removed.
- Safety: Comply with HSE/ Arboriculture and Forestry Advisory Group safety leaflets.
- Felling: As close to the ground as possible.
- Stumps: Remove mechanically to a minimum depth of 300 mm below ground level.
- Work near retained trees: Take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained, where tree canopies overlap and in confined spaces generally.

180 CHIPPING AND SHREDDING
- General: Not permitted.

220 STRIPPING TOPSOIL
- General: Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/ roads and other areas shown on drawings.
- Depth:
- Remove to an average depth of 300 mm.
- Give notice where the depth of topsoil is difficult to determine.
- Handling: Handle topsoil for reuse or sale in accordance with clause 225.
- Around trees: Do not remove topsoil from below the spread of trees to be retained.
- Site storage: Keep separate from excavated sub-soil. Store in locations indicated on Áit drawings.

221 TREATING TOPSOIL
- Treatment: Apply a suitable translocated nonresidual herbicide.
- Timing: Not less than two weeks before excavating topsoil.

225 HANDLING TOPSOIL
- Standard: To BS 3882.
- Aggressive weeds:
- Species: Included in the Weeds Act, section 2 or the Wildlife and Countryside Act, Schedule 9, part II.
- Give notice: Obtain instructions before moving topsoil.
- Contamination: Do not mix topsoil with:
- Subsoil, stone, hardcore, rubbish or material from demolition work.
- Other soil or material containing aggressive weeds, sharps, plastics and non soil forming materials and notifiable animal or plant diseases.
- Oil, fuel, cement or other substances harmful to plant growth.
- Other classifications of topsoil.
- Multiple handling: Keep to a minimum. Use topsoil immediately after stripping.

240 ADJACENT EXCAVATIONS
Refer to the Eningeers Specifications.

242 EXCAVATIONS ADJACENT TO EXISTING BACKFILLED TRENCHES
• Refer to the Eningeers Specifications.

244 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS
- Refer to the Eningeers Specifications

245 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS - CONTRACTOR'S DESIGN
- Refer to the Eningeers Specifications

246 EXCAVATIONS ADJACENT TO PILE SUPPORTED STRUCTURES
- Refer to the Eningeers Specifications

248 BACKFILL TO EXCAVATIONS LOWER THAN FOUNDATION FORMATION LEVEL
- Refer to the Engineers Specifications

250 PERMISSIBLE DEVIATIONS FROM FORMATION LEVELS
- Refer to the Engineers Specifications

255 ACCURACY - LINEAR DIMENSIONS
- Refer to the Engineers Specifications

DISPOSAL OF MATERIALS

410 EXCAVATED TOPSOIL STORAGE
- Storage: Stockpile in temporary storage heaps.

420 TOPSOIL STORAGE HEAPS
- Location: as indicted on Áit drawings
- Standard: To BS 3882.
- Height (maximum): 2.0metres.
- Protection:
- Do not place any other material on top of storage heaps.
- Do not allow construction plant to pass over storage heaps.

- Prevent compaction and contamination.

421 TOPSOIL STORAGE HEAP TREATMENT
- Treatment: Sow with Green Manure Seed Mix, sowing rate 20g/m2 .
- Seed mix: 25% *Secale cereal* (Forage Rye)
  60% *Pisum sativum subsp. arvensis* (Minerva Maple Peas)
  15% *Vicia sativa* (English Early Common Vetch)

441 SURPLUS SUBSOIL
- Excavated material: Stockpile in temporary storage heaps.
- Retained material: Spread and level surplus subsoil on site.
- Locations: as indicated on draiwngs.
- Protected areas: Do not raise soil level within root spead of trees that are to be retained.
- Remaining material: Remove from site.

450 WATER
- Generally: Keep all excavations free from water until:
- Formations are covered.
- Below ground constructions are completed.
- Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
- Drainage: Form surfaces of excavations and fill to provide adequate falls.
- Removal of water: Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

454 GROUND WATER LEVEL, SPRING OR RUNNING WATER
- Give notice: If it is considered that the excavations are below the water table.
- Springs/ Running water: Give notice immediately if encountered.

457 PUMPING
- General: Do not disturb excavated faces or stability of adjacent ground or structures.
- Pumped water: Discharge without flooding the site or adjoining property.
- Sumps: Construct clear of excavations. Fill on completion.
- Locations: to specified by the Engineer.

460 PERMANENT DRAINAGE SYSTEM
- Disposal of water from the excavations through system: Not permitted.

FILLING

610 COMPACTED FILLING FOR LANDSCAPE AREAS
- Fill: Material capable of compaction by light earthmoving plant.
- Filling: Layers not more than 200 mm thick. Lightly compact each layer to produce a stable soil structure.

615 LOOSE TIP FILLING FOR LANDSCAPE AREAS
- Filling: Do not firm, consolidate or compact when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

For all other filling: **Refer to the Engineers Specifications**

Q28 Topsoil and growing media

To be read with Preliminaries/ General conditions.

200 GRADING SUBSOIL
- General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
- Areas of thicker topsoil: Excavate locally.

250 SUBSOIL SURFACE PREPARATION
- General: Excavate and/ or place fill to required profiles and levels, as section D20.
- Loosening:
- Light and noncohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm.
- Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm.
- Rock and chalk subgrades: Lightly scarify to promote free drainage.
- Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
- Remove Arisings, contaminants and debris and Builders rubble.

260 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for lawn areas and planting beds.
- Notice period: 10 days.

310 PREPARATION OF UNDISTURBED TOPSOIL
- Standard: In accordance with BS 4428.
- Grading and cultivation: To suit cultivation operations specified in Q30 OR Q31.
- Hard ground: Break up thoroughly.
- Clearing: Remove visible roots and large stones with a diameter greater than 50 mm.
- Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil.
- Fallow period (minimum): two weeks.
- Weed control: At appropriate times treat with a suitable translocated non-residual herbicide.

320 TEMPORARY CROP ON UNDISTURBED TOPSOIL
- Treatment: Sow with Green Manure Seed Mix, sowing rate 20g/m2 .
- Seed mix: 25% *Secale cereal* (Forage Rye)
  60% *Pisum sativum subsp. arvensis* (Minerva Maple Peas)
  15% *Vicia sativa* (English Early Common Vetch)
- Maintenance: In accordance with seed supplier's recommendations.

330 SURPLUS TOPSOIL TO BE RETAINED
- Generally: Spread and level on site:
- Locations: as per Áit drawings.
- Protected areas: Do not raise soil level within root spread of trees that are to be retained.

335 SURPLUS TOPSOIL TO BE REMOVED
- Generally: Remove from site topsoil remaining after completion of all landscaping work.

340 IMPORTED TOPSOIL TO BS 3882
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: To BS 3882.
- Classification: Sandy Clay Loam
- Source: ENRICH (www.enrich.ie) or similar approved.
- Submit: Declaration of analysis in accordance with BS 3882, Annex E.
- Additional analyses: Not required.

341 LOAD BEARING SOIL
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- Standard: n/a
- Classification: crushed stone, sandy clay loam, peat free compost. Total pore volume > 35%. Moisture Content 12-20%. Total Nitrogen 500 mg/L, Phosphorous 300mg/L, Potassium 450 mg/L, Magnesium 200 mg/L, Calcium 3000 mg/L, Sulphur 250 mg/L. Organic content (LOL) 3-7% w/w. CBR rating; greater than 40. Bulk density; 1.3ton/cubic metre. pH value 6.5-7.9. Water permeability 1.7 x 10 m/s
- Source: ENRICH (www.enrich.ie) or similar approved.
- Submit: Declaration of analysis in accordance with BS 3882, Annex E.
- Additional analyses: Not required.

355 COMPOST
- Standard: In accordance with PAS 100.
- Supplier: ENRICH (www.enrich.ie) or similar approved.
- Product reference: Multi Purpose Compost or similar approved.
- Type: Sanitized and stabilized compost.
- Horticultural parameters:
- pH (1:5 water extract): 7.0-8.7.
- Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
- Moisture content (m/m of fresh weight): 35-55%.
- Organic matter (minimum): 25%.
- Grading (air dried samples): 99% passing 25 mm screen, and 90% a 10 mm screen mesh aperture.
- Carbon:Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.
- Composting Association certification: Not required.
- Submit: Declaration of analysis.
- Additional analyses: Not required.
- Samples: Supply 5 kg sample before ordering.
- Application rate: 3:1, topsoil:compost max.
- Timing: Apply prior to cultivation.

650 NOTICE OF IMPORTING TOPSOIL
- Give notice: Before stripping topsoil for transfer to site.
- Notice period: 5 days.

660 SAMPLE LOAD OF IMPORTED TOPSOIL
- General: Deliver to site a sample load of not less than 0.5 m³.
- Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
- Notice period: 5 days.

670 CONTAMINATION
- 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.
- Subsoil: In areas to receive topsoil, do not use subsoil contaminated with the above materials.
- Give notice: If any evidence or symptoms of soil contamination are discovered on the site, or in topsoil to be imported.

680 TOPSOIL STORAGE HEAPS
- Location: as per Temporary Compound drawings.
- Height (maximum): 2.0 m.
- Width (maximum): 2.0 m.
- Protection:
- Do not place any other material on top of storage heaps.
- Do not allow construction plant to pass over storage heaps.
- Prevent compaction and contamination, by fencing and covering as appropriate.

685 TEMPORARY CROP ON TOPSOIL STORAGE HEAPS
- Treatment: Sow with Green Manure Seed Mix, sowing rate 20g/m2 .
- Seed mix: 25% *Secale cereal* (Forage Rye)
  60% *Pisum sativum subsp. arvensis* (Minerva Maple Peas)
  15% *Vicia sativa* (English Early Common Vetch)
- Maintenance: In accordance with seed supplier's recommendations.

690 HANDLING TOPSOIL
- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
- Plant: Select and use plant to minimize disturbance, trafficking and compaction.
- Contamination: Do not mix topsoil with:
- Subsoil, stone, hardcore, rubbish or material from demolition work.
- Other grades of topsoil.
- Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
- Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.

700 SPREADING TOPSOIL
- Temporary roads/surfacing: Remove before spreading topsoil.
- Layers:
- Depth (maximum): 150 mm.
- Gently firm each layer before spreading the next.
- Depths after firming and settlement (minimum): as per Áit details and drawings.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

710 LOOSE TIPPING OF TOPSOIL
- General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.
- Depths after settlement (minimum): as per Áit details and drawings.

910 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT
- Above adjoining paving or kerbs: 25 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 75 mm.
- Within root spread of existing trees: Unchanged.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

Q30 Seeding/turfing

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/REQUIREMENTS

115 SEEDED AND TURFED AREAS
- Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
- Appearance: A closely knit, continuous ground cover of even density, height and colour.

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

145 WATERING
- Quantity: Wet full depth of topsoil.
- Application: Even and without displacing seed, seedlings or soil.
- Frequency: as necessary to ensure the establishment and continued thriving of all seeding/turfing.

146 WATERING
- Quantity: Wet full depth of topsoil.
- Application: Even and without displacing seed, seedlings or soil.
- Frequency: twice weekly during dry spells.
- Dry Spell: posts 2 weeks without rain (precipitation less than 20mm in 14 days) during months April to September.

150 WATER RESTRICTIONS
- Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

160 NOTICE
- Give notice before:
  - Setting out.
  - Applying herbicide.
  - Applying fertilizer.
  - Preparing seed bed.
  - Seeding or turfing.
  - Visiting site during maintenance period.
- Period of notice: 1 week.

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

PREPARATION

210 HERBICIDE FOR ALL GRASSED AREAS
- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
  - Duration: As manufacturer's recommendation.

212 SEED BED CLEANING BEFORE SOWING ALL GRASSED AREAS
- Operations: As seed supplier's recommendations..

222 SOIL AMELIORANT/CONDITIONERFOR ALL GRASSED AREAS
- Type: n/a.
- Reference/ Description/ Grading: n/a.
- Samples: n/a.
- Application rate: n/a.
- Timing: Apply prior to cultivation.

250 CULTIVATION
- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer: n/a
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
  - Depth: 150 mm.
  - Particle size (maximum): 10 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.

260 GRADING
- 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 150 mm .
- Give notice: If required levels cannot be achieved by movement of existing soil.

270 FERTILIZERFOR ALL GRASSED AREAS
- Types: n/a
- Application: n/a
- Coverage: n/a

275 FERTILIZERFOR ALL GRASSED AREAS
- Type: n/a.
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Application: Before final cultivation and three to five days before seeding/ turfing.
  - Rate: Spread evenly at 70 g/m².

280 FINAL CULTIVATION
- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
  - Depth: 25 mm.
  - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
  - Remove surface stones/earth clods exceeding:

  General areas: 20 mm.
  Fine lawn areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

290 PREPARATION FOR HYDRAULIC SEEDING
- Clearance: Remove rubbish, and stones with any dimension exceeding: 40 mm.
- Herbicide:
  - General weeds: Selective contact herbicide.
  - Pernicious weeds: Selective hormone herbicide.
- Grading: Smooth, flowing levels.
  - Cultivation: Ensure grass roots can penetrate substrate.
- Finished surface: Ribbed or rough textured.
- Reinforcement: As specialist contractor's recommendation.
  - Fixing: As specialist contractor's recommendation.

SEEDING

310 GRASS SEED FOR ALL GRASSED AREAS
- Mixture: 80% Fescue species, 20% Brown top bent.
- Application rate: 45 g/m².

311 MEADOW SEED MIX FOR ALL MEADOW AREAS
- Mixture: wildflower/ grass seed mix 20/80. Wildflower mix; EC 10 available from www.wildflowers.ie, grass; Bent/Fescue
- Application rate: 5 g/m².

319 QUALITY OF SEED FOR ALL GRASSED AREAS
- Freshness: Produced for the current growing season.
- Certification: Blue label certified varieties.
  - Standard: EC purity and germination regulations.
  - Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- Samples of mixtures: Submit when requested.

330 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.

335 GRASS SOWING SEASON
- Grass seed generally: April to June or August to October.

336 WILDFLOWER SOWING SEASON
- Wildflower seed generally: March to May or August to October.

340 PRE-EMERGENT HERBICIDEFOR ALL GRASSED AREAS
- Standard: Pesticide Safety Directorate approved.
- Application rate: In accordance with manufacturer's written recommendation.
  - Timing: Immediately after sowing.

350 TURF EDGING TO SEEDED AREAS
- Standard: To BS 3969, with no perennial ryegrass.
  - Seed mix: Similar to seeded area.
- Timing: Before sowing.
- Preparation: Rake back a 750 mm wide margin around prepared seed beds.
  - Level of seed bed: Married in with turf.
- Placement: Single row laid end to end and trimmed to a line.
- Watering: On completion.

352 EDGES TO SEEDED AREAS ADJACENT TO PLANTING BEDS AND TREE PITS
- Timing: After seeded areas are well established.
- Edges: Clean straight lines or smooth curves.
  - Mulch and soil: Draw back to permit edging.
- Arisings: Remove.
- Completion: Respread soil and mulch.
- Grass cover: n/a.

405 CULTIVATED TURF FOR ALL GRASSED AREAS
- Supplier: n/a
- Seed mixture: 80% Fescue species, 20% Brown top bent.
- Properties of soil used for turf production: Well drained sandy loam.

410 TURF TO BS 3969 FOR ALL GRASSED AREAS
- Standard: To BS 3969, free from undesirable grasses and weeds.
  - Grade: General purpose utility turf with no perennial ryegrass.
- Source: Submit proposals.
- Herbicide treatment: Apply not less than four weeks and not more than three months before lifting.

420 DELIVERY AND STORAGE
- Timing: Lay turf within 24 hours of delivery to site.
- Frosty weather or waterlogged ground: Do not lift turf.
- Delivery: Arrange to avoid need for excessive stacking.
- Stacking height (maximum): 1 m.
- Dried out or deteriorated turf: Do not use.

423 INSPECTION OF TURF
- Give notice: Before lifting turf for all grassed areas.

428 COMPOST DRESSING FOR TURF
- Type: Sanitized and stabilized compost.
- Supplier: ENRICH (www.enrich.ie) or similar approved.
  - Product reference: Multi Purpose Compost or similar approved.
- Standard: To PAS 100.
- Horticultural parameters:
  - pH (1:5 water extract): 7.0-8.7.
  - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
  - Moisture content (m/m of fresh weight): 35-55%.
  - Organic matter content (minimum): 25%.
  - Grading (air dried samples): 100% passing screen mesh aperture of n/a.
  - Carbon:Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.
- Composting Association certification: Not required.
- Declaration of analysis: Submit.
- Additional analyses: Not required.
- Samples: Supply 5 kg sample before ordering.
- Application rate: n/a.
- Timing: Apply prior to cultivation.

429 DRESSING FOR TURF
- Type: Sandy loam.
- Supplier: n/a.
  - Product reference: n/a.
- Additional analyses: Not required.
- Samples: Supply 5 kg sample before ordering.
- Application rate: n/a.
- Timing: Apply prior to cultivation.

430 TURFING GENERALLY
- Time of year: April-September, unless otherwise instructed..
- Timing of laying:
  - Spring and summer: Within 18 hours of delivery.
  - Autumn and winter: Within 24 hours of delivery.
- Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.
- Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
- Jointing: Laid with broken joints, well butted up. Do not stretch turf.
- Edges: Whole turfs, trimmed to a true line.
- Adjusting levels: Remove high spots and fill hollows with fine soil.
- Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
- Dressing, brushed well in to completely fill all joints: 35% Finely sifted topsoil, 35% Compost, 30% Sand .
- Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.

440 TURFING ON BANKS EXCEEDING 30° SLOPE
- Turf configuration: Diagonal or horizontal.
- Securing turfs:
  - Fixings: Galvanized wire pins, bent or hairpin pattern, 200 mm long x 4 mm diameter or Pointed softwood pegs, 200 mm long x 25 mm square.
  - Frequency of fixings: Each turf.
- Removal of fixings: When instructed. Make good any damage to grass until area is accepted.

445 TURF NETTING
- Turf configuration: Diagonal or horizontal.
- Turf netting:
  - Jute mesh;
  - Plastics or nylon mesh; or
  - Wire netting to BS EN 10223-2, 20 mm mesh size, 0.7 mm wire diameter, zinc coated.
- Fixings for netting: Galvanized wire pins, bent or hairpin pattern, 200 mm long x 4 mm diameter or Pointed softwood pegs, 200 mm long x 25 mm square.
  - Frequency of fixings: 6 per m2 or 8 per m2.
- Removal of mesh and fixings: When instructed. Make good any damage to grass until area is accepted.

450 TRIMMING TURF
- Newly planted tree pits: Neatly cut away around individual trees.
  - Diameter: min. 1.0 metre.
  - Tree pit surface: Respread existing mulch.

PROTECTING/CUTTING

510 PROTECTIVE FENCING
- Fencing type: As section Q40.
  - Height: min. 1100mm
- Erection: On completion of seeding/ turfing.
- Removal: After grass is well established. Fencing will remain the property of the Contractor.

530 FIRST CUT OF GRASSED AREAS
- Timing: When grass is reasonably dry.
  - Height of initial growth: 40-75 mm.
- Preparation:
  - Debris and litter: Remove.
  - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 40 mm.
- Mower type: Cylinder.
- Arisings: As schedule.

540 FIRST CUT OF ALL GRASSED AREAS
- Height of initial growth: As schedule.
- Preparation:
  - Debris and litter: Remove.
  - Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: As schedule.
- Mower type: As schedule.
- Arisings: As schedule.

550 AREAS NOT TO BE CUT
- Do not cut:

n/a.

590 CLEANLINESS
- Soil and arisings: Remove from hard surfaces.
- General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.

MAINTENANCE

605 MAINTENANCE
- Duration: Carry out the following operations from completion of seeding/ turfing until practical completion OR the end of the defects liability period.

610 FAILURES OF SEEDING/TURFING
- Defective materials or workmanship: Areas that have failed to thrive.
  - Exclusions: Theft or malicious damage.
- Method of making good: Recultivation and reseeding/ returfing.
- Timing of making good: The next suitable planting season.

620 MAINTAINING GENERAL GRASSED AREAS
- Maximum height of growth at any time: 75 mm.
- Preparation: Before each cut remove all litter and debris.
- Cutting: As and when necessary to a height of 50 mm.
  - Arisings: Remove.
- Bulb planting areas: Do not cut until bulb foliage has died down.
- Trimming: All edges.
  - Arisings: Remove.
- Weed control: Substantially free of broad leaved weeds.
  - Method: Application of a suitable selective herbicide.
- Stones brought to the surface: Remove regularly.
  - Size: Exceeding 25 mm in any dimension.
- Areas of settlement: Make good.
- Watering: When instructed.

650 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS
- Preparation: Before each cut remove all litter and debris.
- Height and frequency of cut in first growing season:
  - Time of first cut: March/ April OR June/July.
  - Height of first cut: 75 mm.
  - Frequency of subsequent cutting (minimum): Every 6-8 weeks until autumn.
  - Height of growth permitted (maximum): 100 mm.
- Height and frequency of cut in second growing season:
  - Time of cut: Single cut in October.
  - Height of cut: 75 mm.
- Trimming: All edges.
  - Arisings: Remove.
- Watering: When instructed.

660 MAINTAINING GRASSED AREAS WITH ANNUAL WILD FLOWERS
- Preparation: Before each cut remove all litter and debris.
- Timing of first cut: After flowers have set seed..
- Height of first cut: n/a.
- Subsequent cutting: As necessary, so the height of growth does not exceed n/a.
  - Height of cut: n/a.
- Trimming: All edges.
  - Arisings: Remove.
- Watering: When instructed.

680 MAINTENANCE FERTILIZERFOR ALL GRASSED AREAS EXCEPT WILDFLOWER MEADOWS
- March application: 15:10:10 Spring turf fertilizer at 35 g/m².
- September application: 5:10:10 Autumn turf fertilizer at 50 g/m².

Q31 External planting

To be read with Preliminaries/General conditions.

GENERAL INFORMATION/ REQUIREMENTS

112 SITE CLEARANCE GENERALLY
- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 50 mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
- Vegetation: Clear scrub to ground level by flail mowing and remove arisings; retain and protect trees indicated on drawings.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
- Additional requirements: Removal of....

118 SOIL CONDITIONS
- Soil for cultivating and planting: Moist, friable and (excepting aquatic/ marginal planting) not 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.

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

125 TIMES OF YEAR FOR PLANTING
- Deciduous trees and shrubs: Late October to late March.
- Conifers and evergreens: September/ October or April/ May.
- Herbaceous plants (including marginal): September/ October or March/ April.
- Container grown plants: At any time if ground and weather conditions are favourable.
- Watering and weed control: Provide as necessary.
- Dried bulbs, corms and tubers: September/ October.
- Colchicum (crocus): July/ August.
- Green bulbs: After flowering in spring.
- Wildflower plugs: Late August to mid-November or March/ April.
- Aquatic plants: May/ June or September/ October.

130 MECHANICAL TOOLS
- Restrictions: Do not use within 100 mm of tree and plant stems.

145 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.

150 WATER RESTRICTIONS
- General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

160 NOTICE
- Give notice before:
- Setting out.
- Applying herbicide.
- Applying fertilizer.
- Delivery of plants/ trees.
- Planting shrubs.
- Planting trees into previously dug pits.
- Watering.
- Visiting site during maintenance period.
- Period of notice: 3 working days.

165 PREPARATION, PLANTING AND MULCHING MATERIALS
- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

200 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.
- Standard: The relevant parts of BS 3936.
- Species: True to name.
- Origin/ Provenance: As plant schedule.

Definition: Origin and Provenance have the meaning given in the National Plant Specification.

215 PLANTS/ TREES - SPECIFICATION CRITERIA
- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.

225 BULBS/ CORMS/ TUBERS
- Condition: Firm, entire, not dried out or shrivelled.
- Health: Free from pests, diseases and fungus.
- Handling: Remove from packaging immediately.
- Storage: Permitted only when necessary.
- Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
- Duration: Minimum period.
- Temperature: 18-21°C.

235 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.

245 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.
- Additional information: Submit on request:
- Country of origin;
- Date supplied and consignment details or reference;
- Impact of pest/ disease;
- Name or designation of rootstock of budded or grafted plants;
- Potting dates;
- Propagation method and dates;
- Pruning dates; and
- Type of container.

246 LABELLING AND INFORMATION

- Standard: To BS 3936.

255 PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES
- Types/ Species: As plant schedule.
- Predelivery inspection: Give notice.
- Labelling: Identify inspected plants/ trees as reserved for use on this project.

260 PLANT/ TREE SUBSTITUTION
- Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering:

Submit alternatives, stating:
- Price.
- Difference from specified plants/ trees.
- Approval: Obtain before making any substitution.

265 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.
- Plant packaging: n/a.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

275 PERMANENT IDENTIFICATION OF PLANTS
- Location: n/a
- Labels: n/a
- Wording: n/a

280 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.

285 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.

290 SURPLUS MATERIAL
- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS

300 HERBICIDE TO CLEAR OVERGROWN BEDS
- Locations: All planting areas.
- Type: Suitable for supressing perennial weeds, Glyphosate or similar approved..
- Timing: Allow fallow period before cultivation.
- Duration (minimum): as per manufacturer's recommendation.

305 WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS
- Locations: All planting areas.
- General: Prevent weeds from seeding and perennial weeds from becoming established, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotwood code of practice'.

335 GENERAL FERTILIZERFOR ALL PLANTED AREAS
- Locations: All planting areas.
- Manufacturer: submit proposals for landscape architects approval.
- Product reference: submit proposals for landscape architects approval.
- Application: Spread evenly.
- Timing: Immediately before cultivation.
- Rate: 120g/m2.

341 PEAT
- Peat or products containing peat: Do not use.

361 COMPOSTFOR ALL PLANTED AREAS
- Locations: All planting areas.
- Type: Sanitized and stabilized compost.
- Manufacturer/ Supplier: Enrich (www.enrich.ie)
- Product reference: Multi Purpose Compost
- Standard: To PAS 100.
- Horticulture parameters:
- pH (1:5 water extract): 7.0-8.7.
- Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
- Moisture content (m/m of fresh weight): 35-55%.
- Organic matter content (minimum): 25%.
- Grading (air dried samples): 99% passing 25 mm screen, and 90% passing 10 mm screen mesh aperture.
- Carbon:Nitrogen ratio (maximum): 20:1.
- Texture: Friable.
- Objectionable odour: None.
- Composting Association certification: Required.
- Application: Spread evenly.
- Timing: Apply prior to cultivation.
- Rate: 50 mm thick layer.
- Other requirements: Submit 5kg sample before ordering.

375 CULTIVATION
- Compacted topsoil: Break up to full depth.
- Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
- Depth: as per Áit drawings and details..
- Timing: Within a few days before planting.
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: as per Áit drawings and details..
- Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm.
- Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS

400 RANDOM PLANT LAYOUTTO ALL BEDS
- Spacing: as per Áit drawings and details.
- Density: as per Áit drawings and details.

401 REGULAR PLANT LAYOUTTO ALL BEDS
- Spacing: as per Áit drawings and details.
- Density: as per Áit drawings and details.

405 SHRUB PLANTING PITS
- Timing: Excavate 2 days (maximum) before planting.
- Sizes: 150 mm wider than roots when fully spread and 300 mm deep.
- Pit bottom improvement Break up to a depth of 150 mm.
- Backfilling material: Reuse excavated material.

420 CLIMBING PLANTS
- Planting: 150 mm clear of supporting structure (e.g. wall/ fence) with roots spread outward.
- Branches: Lightly secured to supports.

- Climber supports:
- Stainless steel wire.
- Base height: as per Áit drawings and details.
- Extent: as per Áit drawings and details.
- Centres: as per Áit drawings and details.
- Distance from wall: as per Áit drawings and details.
- Fixings: Galvanized screw eyes.
- Centres: 2 m.

435 CLIMBING PLANTS USED AS GROUND COVER
- Planting:
- Canes or other supports: Remove.
- Arrangement: Spread stems.
- Fixing: Pinned to ground to ensure good contact.

445 PLANTING BULBS/ CORMS/ TUBERS
- Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
- Backfilling: Finely broken soil. Lightly firm to existing ground level.
- Naturalized planting in existing grassed areas:
- Scattering: Random. Plant bulbs/ corms/ tubers where they fall.
- Planting: Neatly remove a plug of turf and replace after planting.

470 FORMAL HEDGES
- Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.
- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

471 NATURALIZED HEDGES
- Planting: In trenches large enough to take full spread of roots. Set out plants evenly.

472 FENCING SUPPORT FOR NEW HEDGES
- Type: as per Áit drawings and details.

476 SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL
- Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:
- Ameliorant/ Conditioner: as per Clause 361 above and Áit details.
- Fertilizer: n/a.

480 AFTER PLANTING
- 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.
- Top dressing: n/a

485 MULCHING PLANTING BEDS
- Material: Medium grade bark mulch, no splinters of fines.
- Purity: Free of pests, disease, fungus and weeds.
- Recycled content: None permitted.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 mm depth.
- Finished level of mulch: 50 mm below adjacent grassed or paved areas.

PLANTING TREES

505 TREE PITS
- Sizes: as per Áit drawings and details.
- 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 200 mm.
- Treatment: as per Áit drawings and details.
- Pit sides: Scarify.
- Backfilling material: Reuse excavated material.
- Accessories:
- Perforated plastics irrigation/ ventilation pipe;
- Root barrier; adjacent footpaths.
- Tree pit drainage layer; as per Áit drawings and details.
- Underground guying to BS 4043; and as per Áit drawings and details.

510 TREE PIT ROOT BARRIERS
- Locations: as per Áit drawings and details.
- Manufacturer Greenleaf or similar approved.
- Product reference: Reroot 2000, 2mm thick, 60mm deep.
- Depth of top of root barrier below finished soil level: Flush OR 25 mm OR 50 mm OR 75 mm.
- Installation: With sides vertical.

512 TREE PIT ACCESSORIES
- Locations: as per Áit drawings and details.
- Manufacturer: as per Áit drawings and details.
- Product reference: as per Áit drawings and details.
- Type: as per Áit drawings and details.

525 SEMIMATURE TREES
- Standard: Prepare roots and transplant to BS 4043.
- Backfilling material: as per Áit drawings and details.
- Support: as per Áit drawings and details.
- Protection: as per Áit drawings and details.

535 STAKING GENERALLY
- Stakes: peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
- Preservative treatment: pressure treated with 'Tanalith E' or similar approved.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
- Stake size (minimum): 50 mm diameter.

545 LONG SINGLE STAKING FORSTANDARD TREES
- Staking: Position stake close to tree on windward side and drive vertically at least 450 mm into bottom of pit before planting.
- Backfilling: Consolidate material around stake.
- Height of stakes: Cut off just below lowest branch of tree.
- Ties: Adjustable ties.
- Tying: Secure tree firmly but not rigidly to stake with at least two ties. Use three ties if necessary to prevent tree touching stake.
- Position: Top tie within 25 mm of top of stake and lower tie approximately halfway down.

555 SHORT SINGLE STAKING FORWHIPS AND FEATHERED TREES
- Staking: Position stake close to tree on windward side and drive vertically at least 450 mm into bottom of pit before planting.
- Backfiling: Consolidate material around stake
- Height of stakes: Cut to approximately 600 mm above ground level.
- Ties: Adjustable ties.
- Tying: Secure tree firmly but not rigidly to stake with one tie within 25 mm of top of stake.

565 LONG DOUBLE STAKING FOR HEAVY STANDARD TREES / SEMI-MATURE TREES.
- Staking: Drive stakes vertically at least 450 mm into bottom of pit on either side of tree position before planting.
- Backfilling: Consolidate material around stakes.
- Height of stakes: Cut off just below lowest branch of tree.
- Cross bar: Wood, as stake.
- Firmly fix on windward side of tree and as close as possible to stem.
- Ties: Adjustable ties.
- Tying: Secure tree firmly but not rigidly to cross bar.

586 TREE BACKFILLING MATERIAL
- Composition: as per Áit drawings and details.

590 MULCHING TREES
- Material: Medium grade bark mulch or as per Áit drawings and details..

- Purity: Free of pests, disease, fungus and weeds.
- Recycled content: None permitted.
- Preparation: Clear all weeds. Water soil thoroughly.
- Coverage: 75 mm depth, min. 1.0 metre diameter.
- Finished level of mulch: 50 mm below adjacent grassed or paved areas.

WOODLAND/ MATRIX/ BUFFER ZONE PLANTING

600 WOODLAND WORK GENERALLY
- Services: Check for below and above ground services, including land drainage, in the vicinity. Give notice if they may be affected and obtain instructions before proceeding.
- Safety: Comply with Arboriculture and Forestry Advisory Group Safety leaflets.

605 EXISTING VEGETATION/ WEED CLEARANCE
- Surface vegetation clearance: In areas shown on Áit drawings using suitable nonresidual herbicide.
- Arisings: Remove.

615 EXISTING TREES/ SEEDLINGS/ COPPICE SHOOTS
- Existing trees and seedlings: Retain.
- Coppice shoots: Thin to 3-5 stems per stool, removing all damaged, dead or diseased shoots.

617 REMOVING TREES AND HEDGES
- 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.
- Arisings: Remove.
- Tree stumps: Remove mechanically to a minimum depth of 300 mm below ground level.

625 CULTIVATION
- General: Rotary cultivate to full depth of topsoil.
- Consolidation: Leave for 1 month.
- Soil within root spread of trees to be retained: Do not plough or cultivate.

635 NOTCH PLANTING IN UNCULTIVATED GROUND
- Notching: Make a vertical 'I', 'L', 'T' or 'H' notch.
  - Depth: To accommodate full depth of roots.
- Planting: Plant tree, close notch with root collar at ground level and firm the soil.

645 PLANTING IN TURF
- Preparation: Cut and upturn a turf of minimum 300 mm square.
- Notching: Make a vertical slit from the centre of the turf, to the side away from the prevailing wind.
  - Depth: To accommodate full depth of roots.
- Planting: Plant tree, close notch with root collar at ground level and firm the soil.

655 FURROW PLANTING
- Notching: Make a vertical notch or pit on ridges.
  - Size of notch/ pit: Large enough to accommodate full depth/ spread of roots.
- Planting: Plant tree and backfill or close the notch with the root collar at ground level and firm the soil.

665 SETTING OUT
- Distance between trees: as per Áit drawings.
- Distance between rows: as per Áit drawings.

680 SETTING OUT
- Planting density: as per Áit drawings.

PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

710 MAINTENANCE
- Duration: Carry out the operations in the following clauses from completion of planting until practical completion OR the end of the defects liability period.
- Frequency of maintenance visits: In accordance with the agreed maintenance schedule.

720 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.
- Timing of making good: In accordance with an agreed defects rectification programme.

730 PROTECTIVE FENCING
- Fencing type: General pattern wire mesh fencing as section Q40.
  - Height: n/a.
- Erection: On completion of planting.
- Removal: Fencing will remain the property of the Contractor. Remove and refill post holes following acceptance of rectified defects.

740 CLEANLINESS
- 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.

750 PLANTING MAINTENANCE GENERALLY
- Weed control: Maintain weed free area around each tree and shrub.
  - Diameter (minimum): The larger of 1 m or the surface of original planting pit.
  - Keep planting beds clear of weeds: By maintaining full thickness of mulch.
- Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.
- Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
- Staking: Check condition of stakes, ties, guys and guards.
  - Broken or missing items: Replace.
  - Rubbing: Prevent.
  - Ties: Adjust to accommodate growth.
  - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
  - Frequency of checks: At each scheduled maintenance visit.
- Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/shrubs.
- Trees: Spray crown when in leaf during warm weather.
  - Timing: After dusk.
- Watering: When instructed.

755 PLANTING MAINTENANCE - FERTILIZER
- Time of year: March or April.
- Fertilizer: Slow release.
  - Manufacturer: submit proposals.
  - Product reference: submit proposals.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Application rate: To manufacturer's recommendations.

760 PLANTING MAINTENANCE - PRUNING
- General: Prune to promote healthy growth and natural shape.
  - Dead, dying, diseased wood and suckers: Remove.
  - Timing: In accordance with the agreed maintenance schedule.

- Trees: Favour a single central leading shoot.
• Arisings: Remove.

790 FINAL MULCHING
• Timing: At end of the maintenance period.
• Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
• Planting beds: Remulch. Depth (minimum): 75 mm.
• Trees: Remulch. Depth (minimum): 75 mm.

Q35 Landscape maintenance

To be read with Preliminaries/ General conditions.

GENERALLY

105 MAINTENANCE OBJECTIVES
• Location: Belgrove Student Housing, University College Dublin.
- Duration: 24 months post practical completion.
• Aims:
- Enhanced landscape quality;
- Improved landscape visual amenity;
• Results:
- As scheduled.

110 NOTICE
• Give notice before:
- Application of herbicide.
- Application of fertilizer.
- Watering.
- Each site maintenance visit.
• Period of notice: 3 days.

130 REINSTATEMENT
• Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.

140 CONTROL OF MAMMALIAN PESTS
• Specialist firms: n/a.
- Method: to be agreed.

155 WATERING
• Supply: Potable mains water OR rain water from storage tank.
• Quantity: Wet to field capacity.
• Application: Do not damage or loosen plants.
• Compacted soil: Loosen or scoop out, to direct water to rootzone.
• Frequency: As necessary for the continued thriving of all planting.

160 WATER RESTRICTIONS
• General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

170 DISPOSAL OF ARISINGS
• General: Unless specified otherwise, dispose of arisings as follows:
- Biodegradable remove to greenwaste recycling facility OR agreed compost heap on site .
- Grass cuttings: remove to greenwaste recycling facility OR agreed compost heap on site .
- Tree roots and stumps: Remove from site.
- Shrub and tree prunings: Chip on site and spread under hedge plantings shown on drawing OR remove to green waste recycling facility.
- Litter and non-biodegradable arisings: Remove from site.

181 MECHANICAL EQUIPMENT
• General: Minimize.
• Prohibited equipment: none specified.
• Timing: Use of mechanical equipment allowed between the hours of 8:00 am and 6:00 pm only (Monday-Friday), 10:00am-6.00pm Saturday and Sunday.

190 LITTER

- Extraneous rubbish not arising from the contract work: Collect and remove from site.

195 PROTECTION OF EXISTING GRASS
- General: Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on grass.

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

GRASSED AREAS

210 MAINTENANCE OF GRASSED AREAS
- General: Maintain turf in a manner appropriate to the intended use.
- Soil and grass:
- Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
- Waterlogging and compaction: Prevent.
- Damage: Repair trampling, abrasion or scalping.
- Ornamental lawns: Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts.
- Edges: Neat and well defined, in clean straight lines or smooth flowing curves.
- Litter and fallen leaves: Remove regularly to maintain a neat appearance.

220 GRASS CUTTING GENERALLY
- Before mowing: Remove litter, rubbish and debris.
- Finish: Neat and even, without surface rutting, compaction or damage to grass.
- Edges: Leave neat and well defined. Neatly trim around obstructions.
- Adjoining hard areas: Sweep clear and remove arisings.
- Drought or wet conditions: Obtain instructions.

226 TREE STEMS
- Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
- Operations close to stems: Complete using hand tools.

235 BULBS AND CORMS IN GRASSED AREAS
- Before flowering: Do not cut.
- Interval between end of flowering and start of grass cutting (minimum): 2 weeks.

240 MOWING STRIPS
- Location: at base of walls.
- Width (approximate): n/a
- Operations: maintain with nylon filament rotary cutters and other mechanical tools.

250 LEAF REMOVAL
- Operations: Collect fallen leaves.
- Special requirements: Remove by hand raking.
- Disposal: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

255 FIRST CUT OFALL GRASSED AREAS
- Height of initial growth: 100mm
- Preparation:
- Debris and litter: Remove.
- Stones and earth clods larger than 25 mm in any dimension: Remove
- Height of first cut: 50 mm.
- Mower type: not specified
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

260 MOWING LAWNS
- Grass height: Maintain between 25 and 50 mm.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

262 MOWING SPORTS FIELDS
- Grass height: 25 mm maximum.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

265 MOWING GENERAL AREAS
- Grass height: Maintain between 50 and 75 mm.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

270 MOWING ROUGH GRASSED AREAS
- Grass height: 75 mm maximum.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

272 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS
- Preparation: Before each cut remove litter and debris.
- Height and frequency of cut in first growing season:
- Time of first cut: March/ April.
- Height of first cut: 100 mm .
- Frequency of subsequent cutting (minimum): Every 6 to 8 weeks until autumn.
- Height of growth permitted (maximum): 125 mm.
- Height and frequency of cut in second growing season:
- Time of cut: Single cut in October.
- Height of cut: 100 mm.
- Trimming: All edges.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- Watering: When instructed.

273 MAINTAINING GRASSED AREAS WITH ANNUAL WILD FLOWERS
- Preparation: Before each cut remove all litter and debris.
- Timing of first cut: After flowers have set seed..
- Height of first cut: 100 mm.
- Subsequent cutting: Cut as necessary, so the height of growth does not exceed 125 mm.
- Height of cut: 100 mm.
- Trimming: All edges.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- Watering: When instructed.

275 CUTTING SUMMER FLOWERING WILD FLOWER MEADOWS
- Times of year/ Frequency of cutting: August-September
- Height of cut: 100 mm.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

280 CUTTING SPRING FLOWERING WILD FLOWER MEADOWS
- Times of year/ Frequency of cutting: August-September.
- Height of cut: 100 mm.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility..

285 TOP DRESSING
- Location: All lawns.
- Timing: Following scarification and aeration.
- Material: Dry sand.
- Supplier: n/a.
- Product reference: n/a.
- Declaration of analysis: Not required.
- Additional analyses: Not required.
- Samples: Supply 5 kg sample before ordering.
- Application rate: 1.5 kg/m².

290 ROLLING
- Location: All lawns.
- Timing: February or March, after first mowing.

- Roller: 100 kg (2 cwt).
- Operations: Consolidate turf and reduce frost heave.

295 SPIKING
- Location: All lawns.
- Timing: As necessary to relieve compaction.
- Operations: Aerate the soil and improve surface water penetration.
- Depth (minimum): 100 mm into soil.

300 SCARIFYING
- Location: All lawns.
- Timing: October or November, before top dressing.
- Operations: Relieve thatch conditions and remove dead grass.
- Depth (maximum): 25 mm into soil.
- Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.

305 HARROWING
- Location: All lawns.
- Timing: October or November, after top dressing.
- Operations: Aerate soil and remove worm casts.
- Type of harrow: Chain harrow or drag mat.

307 HOLLOW TINING
- Location: All lawns.
- Timing: As necessary to relieve compaction.
- Depth: 100 mm.

309 EDGES TO SEEDED AREAS
- Location: Planting beds and around newly planted trees.
- Timing: After seeded areas are well established.
- Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.
- Arisings: Remove to compost heap on site OR remove off site to a greenwaste recycling facility.

310 RE-FORMING GRASS EDGES
- Location:
- All edges;
- Path edges;
- Planting bed edges;
- Service access cover edges; and
- Where damage occurs.
- Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.

325 RELIEVING SURFACE COMPACTION IN TURF
- Standard: To BS 7370-3.
- Method: Spiking OR Surface slitting OR vertical lifting .
- Top dressing: Medium to fine sand.
- Depth: 2-3 mm.

330 SELECTIVE HERBICIDE
- Location: All lawns.
- Herbicide: Combined weed and feed mix.
- Areas not to be sprayed: Bulb and corm planted areas when in leaf AND/OR desirable herbaceous planting AND/OR Wildflower areas.

340 SPOT WEEDKILLING IN ROUGH GRASS AREAS
- Herbicide: Suitable for suppressing perennial weeds; Glyphosate or similar approved.
- Operations: Spot treat
- all broad leaved weeds;
- docks (Rumex spp);
- injurious weed species listed in the Weeds Act 1959 and Wildlife and Countryside Act 1981;
- Japanese knotweed (Fallopia spp);
- nettles (Urtica spp);
- ragworts (Senecio spp);
- thistles (Cirsium spp); and
- willowherb (Epilobium spp).

345 CONTROL OF JAPANESE KNOTWEED
- Operations: Spot treat in June and September during suitable weather conditions and when plants are growing vigorously.
- Herbicide: In accordance with the Environment Agency 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.
- Application: In accordance with the Environment Agency (UK) 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.
- Arisings: In accordance with the Environment Agency 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.

350 FERTILIZER - SPRING APPLICATION
- Type: Slow release OR organic.
- Application rate: 100 g/m².

360 FERTILIZER - AUTUMN APPLICATION
- Type: Slow release OR organic.
- Application rate: 100 g/m².

370 WORM CONTROL
- Location: n/a.
- Manufacturer: n/a.
- Product reference: n/a.
- Timing: n/a.

375 PEST CONTROL
- Location: n/a.
- Treatment: n/a.
- Manufacturer: n/a.

Product reference: n/a.
- Timing: As manufacturer's recommendation.

380 REINSTATEMENT OF DAMAGED LAWNS
- Damaged turf: Remove to a depth of 40 mm.
- Preparation: Cultivate substrate to a fine tilth.
- Reinstatement:
- Returfing: Quality and appearance to match existing.
- Reseeding: Fill with fine topsoil to BS 3882 multi purpose class, free from stones, debris and weeds. Reseed with a seed mix to match existing grass in quality and appearance.
- Protection and watering: Provide as necessary to promote successful germination and/ or establishment.

FLOWER BEDS/ SEASONAL BEDDINGS

460 BEDS OF PERENNIALS OR PERENNIALS AND ANNUALS
- Plant supports: as required Stake and tie plants using
- bamboo canes;
- Length: To suit plant height.
- Maintain throughout the growing season.
- Gaps in planting: replace failures.
- Watering:
- New plants: Before and after planting out.
- Ongoing: As necessary for the continued thriving of all planting.
- Operations at end of growing season:
- Trim: Older flowering stems of herbaceous perennials.
- Remove: Redundant plant supports, litter, debris and arisings.

- Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
- Top dress: Apply sanitized and stabilized compost top dressing OR Fertilizer at a rate of 60g/m2.
- Fungicide: Not required.
- Insecticide: Not required.

SHRUBS/TREES/HEDGES

500 ESTABLISHMENT OF NEW PLANTING
- Duration: Two full growing seasons from the date of planting.
- Weed control:
- Method: Keep planting beds clear of weeds by hoeing and screefing OR maintaining full thickness of mulch OR use of suitable herbicides.
- Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
- Watering: When instructed.

502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER
- Time of year: March or April.
- Type: Organic OR slow release.
- Spreading: Spread evenly. Carefully lift and replace any mulch materials.
- Application rate: As manufacturer's recommendations.

510 TREE STAKES AND TIES
- Inspection/ Maintenance times: on scheduled maintenance visits and immediately after strong winds.
- Stakes:
- Replace loose, broken or decayed stakes to original specification.
- If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
- Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
- Where chafing has occurred, reposition or replace ties to prevent further chafing.
- Removal of stakes and ties: When instructed.
- Fill stake holes with lightly compacted soil.

515 TREE GUY WIRES
- Inspection/ Maintenance times: on scheduled maintenance visits and immediately after strong winds.
- Operations:
- Replace or resecure loose or missing guy wires.
- Adjust to suit stem growth and to provide correct and uniform tension.
- Removal: When instructed.

520 REFIRMING OF TREES AND SHRUBS
- Timing: After strong winds, frost heave and other disturbances.
- Refirming: Tread around the base until firmly bedded.
- Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

525 TREE GUARDS
- Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing.

530 TREE SHELTERS
- Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
- Removal: When instructed.

535 TREE GRILLES
- Operations: Lift grilles, remove weeds, adjust levels as necessary and lightly compact. Refit grilles, refill interstices and lightly compact to correct level.
- - Material for making up levels and refilling: Horticultural grit OR Sharp sand OR 6 mm to dust granite aggregate.

540 PRUNING GENERALLY
- Pruning: In accordance with good horticultural and arboricultural practice.
- Removing branches: Do not damage or tear the stem or bark.
- Wounds: Keep as small as possible and cut cleanly back to sound wood.
- Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
- Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
- Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
- Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
- Disease or infection: Give notice if detected.
- Growth retardants, fungicide or pruning sealant: Do not use unless instructed.

545 PRUNING OF EXCESSIVE OVERHANG
- Timing: as instructed.
- Operations: Remove growth encroaching onto grassed areas, paths, roads, signs, sightlines and road lighting luminaires.
- Special requirements: None.

550 PRUNING OF EXCESSIVE HEIGHT
- Timing: as instructed.

Operations: Remove excessive height as instructed.

555 PRUNING TREES AND SHRUBS
- Standard: To BS 7370-4.
- Special requirements: Growth retardents not permitted.

570 FORMATIVE PRUNING OF YOUNG TREES
- Standard: Type and timing of pruning operations to suit the plant species.
- Time of year: Do not prune during the late winter/ early spring sap flow period.
- Young trees up to 4 m high:
- Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
- Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
- Whips or feathered trees: Do not prune.
- Operatives: competent and trained person(s).

575 PRUNING ORNAMENTAL SHRUBS
- General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
- Suckers: Remove by cutting back level with the source stem or root.

580 PRUNING FLOWERING SPECIES OF SHRUBS AND ROSES
- Time of year:
- Winter flowering shrubs: Spring.
- Shrubs flowering between March and July: Immediately after the flowering period.
- Shrubs flowering between July and October: Back to old wood in winter.
- Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.

590 PRUNING PARTICULAR SPECIES
- Species to be pruned to separate specific instructions: none specified.

600 TRIMMING RAPIDLY ESTABLISHING HEDGES
- General: Allow to reach planned height as rapidly as possible.
- Form: Trim back lateral branches moderately.

605 TRIMMING SLOWLY ESTABLISHING HEDGES
- Operations:

- Timing: Cut back hard in June and September to encourage bushy growth down to ground level.
- Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.

610 TRIMMING TAPERING ESTABLISHED HEDGES
- Time of year: Regular trimming from June to September OR Trim once in July or August .
- Operations:
- Form: Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.
- Trim: Remove current growth rather than old wood.
- Tools/ Cutting: Shears OR Suitable mechanical cutters OR Secateurs .

611 TRIMMING NONTAPERING ESTABLISHED HEDGES
- Time of year: Regular trimming from June to September OR Trim once in July or August.
- Operations:
- Form: Trim carefully and neatly to regular line and shape with vertical sides.
- Trim: Remove current growth rather than old wood.
- Tools/ Cutting: Shears OR Suitable mechanical cutters or Secateurs.

615 TRIMMING FIELD HEDGES
- Operations: Trim to specified height and profile using suitable mechanical cutters. Do not trim from March- October.

620 REMOVAL OF DEAD PLANT MATERIAL
- Operations: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

625 CLIMBING PLANTS
- Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.
- Insecure growth: Attach to supporting wires or structures using Stainless steel wire.
- Supporting structures: Check and repair as necessary.

630 DEAD AND DISEASED PLANTS
- Removal: Within one week of notification.
- Replacement: Within two weeks.

635 REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS
- Dead and damaged plants: Remove.
- Mulch/ matting materials:
- Carefully move to one side and dig over the soil, leaving it fit for replanting.
- Do not disturb roots of adjacent plants.
- Replacement plants:
- Use pits and plants: To original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
- Additional requirements: Submit details and cost of plants before ordering.
- Dressing: Slow release fertilizer:
- Type: Chemical OR Organic.
- Application rate: As manufacturer's recommendations.

645 WEED CONTROL GENERALLY
- Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.
- Adjacent plants, trees and grass: Do not damage.

650 HAND WEEDING
- General: Remove weeds entirely, including roots.
- Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
- Completion: Rake area to a neat, clean condition.
- Mulch: Reinstate to original depth.

657 HERBICIDE TO KILL REGROWTH
- Type: Suitable foliar acting herbicide to kill regrowth.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

665 WEED CONTROL WITH WINTER HERBICIDE
- Type: Suitable residual soil acting herbicide.
- Time of year: Unless otherwise agreed, complete before end of March.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

670 WEED CONTROL WITH SUMMER HERBICIDE
- Type: Suitable foliar acting herbicide.
- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.

680 SOIL AERATION
- Compacted soil surfaces:
- Prick up: To aerate the soil of root areas and break surface crust.
- Size of lumps: Reduce to crumb and level off.
- Damage: Do not damage plants and their roots.

685 SOIL LEVEL ADJUSTMENT
- Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.
- Arisings (if any): Spread evenly over the bed.

690 MAINTENANCE OF LOOSE MULCH
- Thickness (minimum): 75 mm.
- Top up: as required to ensure a consistent depth of 75mm.
- Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.
- Weeding: Remove weeds growing on or in mulch by hand weeding OR Herbicide treatment.

693 MAINTENANCE OF MULCH MATTING/ SHEET MULCHES
- General: Inspect and reattach or refirm mulch mats and sheet mulches.
- Type: Geotextile.
- Remove: After soil surface is fully covered by foliage.

695 FERTILIZING ESTABLISHED TREES AND SHRUBS
- Time of year: not required unless otherwise instructed.
- Type of fertilizer: not required unless otherwise instructed.
- Application: Spread evenly.
- Rate: As manufacturer's recommendations.

700 SNOW REMOVAL FROM SHRUBS/ TREES
- Standard: To BS 7370-4.
- Plants subject to snow removal: all.
- Timing: When instructed.

705 WINTER LEAF REMOVAL
- Operations: Collect dead leaves from all communal open areas.
- Arisings: Remove to a compost heap OR off site to a greenwaste recycling facility.

710 WOODLAND PLANTING MAINTENANCE
- Watering: In exceptional circumstances to prevent plants dying.
- Loose plants: Refirm surrounding soil, without compacting.
- Vegetation: Except trees and coppice shoots to be retained, cut down to 200 mm above ground level within the plantation area.
- Arisings: Leave between rows.
- Ditches and drains: Keep clear.

715 WOODLAND THINNING
- Mature planting density: n/a
- Timing: n/a

720 COPPICING

- Material to be coppiced All understorey material.
- Standard: Good forestry practice.
- Cut stems: As low as possible, or to previous coppice level.
- Finish: Leave sloping upward towards the centre to promote rainwater runoff.
- Brash: Stack around coppice stool to alleviate deer damage.
- Coppiced timber: not specified.

TREE WORK

810 TREE WORK GENERALLY
- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: As section A34.
- Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Removing branches: Cut as Arboricultural Association Leaflet 'Mature tree management'. Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.
- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 ADDITIONAL WORK
- Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 PREVENTION OF WOUND BLEEDING
- Standard: To BS 3998, clause 8.

825 PREVENTION OF DISEASE TRANSMISSION
- Standard: To BS 3998, clause 9 and Appendix B.

830 CLEANING OUT AND DEADWOODING
- Remove:
- Dead, dying, or diseased wood, broken branches and stubs.
- Fungal growths and fruiting bodies.
- Rubbish, wind blown or accumulated in branch forks.
- Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
- Other unwanted objects, e.g. tree houses, swings.
- Climbing plants; remove.

835 CUTTING AND PRUNING GENERALLY
- Tools: Appropriate, well maintained and sharp.
- Final pruning cuts:
- Chainsaws: Do not use on branches of less than 50 mm diameter.
- Hand saws: Form a smooth cut surface.
- Anvil type secateurs: Do not use.
- Removing branches: Do not damage or tear the stem.
- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible. Large branches: Remove only with prior approval.
- Remove in small sections and lower to ground with ropes and slings.
- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 CROWN REDUCTION/ SHAPING
- General: Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.
- Operations: as scheduled or instructed.

845 CROWN LIFTING
- Clearances: Remove branch systems to give clearance.
- Height: as scheduled or instructed.
- Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

850 CROWN THINNING
- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
- Thinning: Selectively remove secondary and small live branch growth evenly throughout the crown.
- Quantity: as scheduled or instructed.
- Cutting: Make no cuts of more than as per schedule.
- Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.
- Appearance: Leave a uniform and well balanced structure of branches and foliage.

855 CUTTING TREE ROOTS
- Excavating: Use hand tools only.
- Protected area: Do not cut roots within an area which is the larger of:
- The branch spread of the tree.
- An area with a radius of half the tree's height, measured from the trunk.
- Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.
- Cutting:
- Cutting: Make clean smooth cuts with a hand saw.
- Wounds: Minimize. Avoid ragged edges.
- Finishing: Pare cut surfaces smooth with a sharp knife.
- Backfilling:
- Protection: Cover cut roots with clean sharp sand.
- Material: Backfill with original topsoil.

860 REMOVING TREES, SHRUBS AND HEDGES
- Standards: To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
- Existing services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and smaller trees: Cut down and grub up roots.
- Tree stumps:
- Removal: Remove mechanically to a minimum depth of 300 mm below ground level.
- Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
- Filling holes:
- Material: Use as-dug material and/ or imported soil as required.
- Finishing: Consolidate and grade to marry in with surrounding ground level.

865 BARK DAMAGE
- Wounds:
- Do not attempt to stop sap bleeding.
- Bark: Remove ragged edges using a sharp knife.
- Wood: Remove splintered wood from deep wounds.
- Size: Keep wounds as small as possible.
- Liquid or flux oozing from apparently healthy bark: Give notice.

870 CAVITIES IN TREES
- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay, and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.
- Cavity openings: n/a.

HARD LANDSCAPE AREAS/FENCING

900 SNOW CLEARANCE
- Clearance: when instructed.
- Deicing: during freezing conditions and/or immediately prior to freezing weather .
- Material: local authority approved salt/grit.

- Timing: When instructed.
- Application rate: Spread evenly at a rate of As manufacturer's recommendations.

910 HARD SURFACES AND GRAVEL AREAS
• Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.
• Hard surfaces: Remove litter, leaves and other debris.
• Surface gutters and channels: Remove mud, silt and debris.
• Drainage gullies: Empty traps and flush clean.
• Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.
• Repairs to flexible bituminous pavings: by others.
• Stain removal: In accordance with BS 7370-2, table 4.

915 PAVING SEALANT
• Type: n/a.
• Manufacturer: n/a.
- Product reference: n/a.
• Application method: As manufacturer's recommendations.
- Coats: As manufacturer's recommendations.
- Coverage: As manufacturer's recommendations.

920 FENCING
• Fences: Inspect and repair to maintain protection against n/a.

930 GRAFFITI REMOVAL
• Method: n/a.
• Subsequent treatment: n/a.
- Finish: n/a.

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

210 WOODEN POST AND RAIL FENCING
• Standard: To BS 1722-7
• Height: as per Áit drawings and details.
• Wood: Larch or other European hardwoods.
- Treatment: pressure treated ‘Tanalith C’ or similar approved.
- Finish: natural
• Maximum centres of posts: as per Áit drawings and details.
• Method of setting posts: as per Áit drawings and details.
• Accessories:
- as per Áit drawings and details.

220 TEMPORARY PROTECTIVE FENCING
• Height: as per Áit drawings and details.
• Wood: Larch or other European hardwoods.
- Treatment: pressure treated ‘Tanalith C’ or similar approved.
- Finish: natural
• Maximum centres of posts: as per Áit drawings and details.
• Method of setting posts: as per Áit drawings and details.
• Accessories:
- as per Áit drawings and details.

EXECUTION

710 INSTALLATION GENERALLY
• Set out and erect:
- Alignment: as per Áit drawings and details.
- Tops of posts: Following profile of the ground.
- Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
- Fixings: All components securely fixed. All to be twice galvanized.

715 COMPETENCE
• Operatives: Contractors must employ competent operatives.

740 SETTING POSTS IN EARTH
• Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
• Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

770 SITE CUTTING OF WOOD
• General: Kept to a minimum.
• Below or near ground level: Cutting prohibited.
• Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

780 MAKING GOOD GALVANIZED SURFACES
• Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
• Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 SITE PAINTING
• Timing: Prepare surfaces and apply finishes as soon as possible after fixing.

COMPLETION

910 CLEANING
• General: Leave the works in a clean, tidy condition.
• Surfaces: Clean immediately before handover.

920 FIXINGS
• All components: Tighten.
- Timing: Before handover.

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7.0 Appendix - Response to LRD Opinion

Appendix - Response to LRD Opinion

4. Parks, biodiversity & Landscaping issues

a) A review of the Reactional Facilities shall be provided so as to include additional active recreational elements along the ground level circuit path and also Block B 5th floor roof

Recreational facilities including half basketball court, calisthenics, BBQ, table tennis, outdoor chess, picnic area and walking/running loop are provided in the project please refer to the Landscape plan 25D06-DR-1000 and the Landscape report for more details

b) Roof gardens: It is recommended that a continuous screen planter should be included on the east/residential side of the roof facilities to provide screening of existing residential areas.

Please refer to the Landscape report – Roof garden and DR-1001 for more details

c) Public plaza: It is recommended that the surface material should be of natural stone, while the further use of large canopy tree species would be welcome

The proposed surface in the public open space is a natural stone please refer to the Landscape plan 25D06-DR-1000 and Landscape report for more details

d) Block A East Façade: It is recommended that vertical greening be applied to brick façades facing existing residential area to continue the green boundary approach to be considered

The detailing of the eastern facade is addressed in the Architect's drawings.

e) Bike/bin units: It is recommended that there is a coordinated façade design, e.g. wood plank finish in associated landscape setting

The detailing of Bike and Bin stores is addressed in the Architect's drawings.

f) The following documents are required to be submitted

- Landscape Masterplan - Submitted

- Hard works/soft works outline plans – For more information on hard and soft landscape materials please refer to the Landscape plan DR-1000 and Landscape report for more details

- Landscape Sections & Elevations - please refer to the Landscape report , Landscape Strategy chapter - Sections for more details

- Landscape Design Statement - please refer to the Landscape report

- Open Space Key Plan with public and communal open spaces calculations and schedule of requirement and provision.

Please refer to the Landscape report and to the project architects report

- Boundary Plan with details - please refer to the Landscape report

- Birds Eye CGIs over public open spaces – provided by 3d Design Bureau

- Green Roof Plan with biodiverse planting – included in the Landscape report

- AA Screening Report Ecological Impact Assessment (Include Invasive Species & Bat survey with roost survey assessment)

provided by Ecologist DNV

- A bio-diversity enhancement plan shall be provided (including details of 'bat friendly' lighting). The impact of artificial lighting on habitats, foraging species etc should be considered

Please refor to Landscape report - Landscape Strategy - Landscape - Biodiversity and SuDS, and information provided by lighting engineer OCSC

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8.0 Outline Maintenance Schedule

Outline Maintenance Schedule

Project Name: Annual Landscape Maintenance													
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
Minimum visits per Month	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**17**
LAWN MAINTENANCE													
Cutting / Collection			1	2	2	2	2	2	2	1	1		**15**
Fertilising				1									**1**
Scarifying				1									**1**
Broadleaf Weed Control					1								**1**
Moss Control									1				**1**
Control Along Edges				1		1		1		1			**4**
Maintain Tree Circles			1		1		1		1		1		**5**
Wildflower/Meadow Grass Cut									1				**1**
Shrub/perennial maintenance													
Pruning		1			1		1				1		**4**
Hedge Cutting		1								1			**2**
Fertilising				1									**1**
Spot treat weed Control		1	1	2	2	2	2	2	2	2	1		**17**
Moss Control		1			1			1			1		**4**
Top up bark Mulching				1						1			**2**
Watering trees, hedge & shrubs					2* *MINIMUM FOR THESE MONTHS **TO BE WATERED AS REQUIRED DURING GROWING SEASON**								**10**
HARD SURFACES													
Sweeping All Surfaces	1	1	1	2	2	2	2	2	2	1	1	1	**18**
Cleaning debris from curb lines	1	1	1	2	2	2	2	2	2	1	1	1	**18**
Cleaning work arisings	1	1	1	2	2	2	2	2	2	1	1	1	**18**
Weed Control				1					1				**2**
Moss Control			1			1			1			1	**4**
Snow and ice Control	**AS INSTRUCTED**												
MISCELLANEOUS													
Woodland Planting Weed Control			1	1	1	1	1	1	1	1			**8**
Tree stake / Tie Adjustments	1	1	1	1		1		1		1	1	1	**9**
Firm in any loose plants				1					1				**2**
Leaf Clearing from windtraps	1	1								1	1	1	**5**
Litter Collection	1	1	1	1	2	2	2	2	2	1	1	1	**17**
PLAY EQUIPMENT													
NOTE	**Weekly inspections to be carried out to ensure equipment is safely maintained to manufacturers specification.**												

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