Glebe House, Crumlin

Landscape Report

Seabren Developments Ltd and Circle VHA CLG

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Contents:

1.0 Site Context

1.1 Site Location

The site is located immediately north west of Crumlin Village, situated close to the junction of Saint Agnes Road and Windmill Road, and lies 4km south west of Dublin City, benefiting from a number of bus routes serving the city centre.

A short walking distance from the site, Crumlin Village has a supermarket, pharmacy, restaurants and bars. A number of primary and secondary schools within the locality include; Rosary College, St.Agnes National School, Loreto College and Drimnagh Castle Primary School. The proposed development site is also within a short walking distance of local green spaces including William Pearse Park to the north east along Windmill Road which contains sports pitches, mature tree planting and a playground, and a local park off of Somerville Avenue situated to the west.

1.2 Existing Site Condition

The subject site is approx. 0.88 hectares in size and contains a protected structure, Glebe House, a derelict three-storey detached period house and the lands to the rear together with the Coruba House lands to the north of the site. The site is located on Saint Agnes Road and bounds Somerville Green to the rear. Located behind Glebe House are a number of industrial workshop units in varying states of repair, with an enclosed paddock to the rear which is used to store materials and graze horses. The eastern part of the site is currently separated from the Glebe House lands by a block work wall and the exterior walls of the industrial units in this location, the existing boundary with Somerville Drive to the east comprises remnant factory walls from since demolished industrial units which had previously existed there. The site includes the grass strip between the Coruba lands and Somerville Drive.

To the south the site is bounded by a community use building, Moeran Hall, and to the west lies a small green space in the context of Somerville Green's housing blocks and their rear gardens. The site is relatively flat with frontage onto Saint Agnes Road defined by a limestone wall with a line of 4 mature Horse Chestnut trees of varying condition, a mature self-seeded Sycamore is also found to the front of Glebe House. More information on the existing trees can be found in the accompanying Arboricultural Report.

Note: Red Line boundary line shown for illustrative purposes only

0 25 50 100 200m

View of site's northern boundary from Crumlin Village road

Front facade of derelict three-storey detached period house; Glebe House

View of existing site boundary from Somerville Green

View towards rear of Glebe House from site's industrial workshop units and parking area

View of site's paddock area and eastern (Somerville Drive) & southern (Moeran Hall) boundaries

Internal view of eastern section of proposed development site: Former factory units

2.0 Landscape Proposals

2.1 Landscape Rationale

The landscape proposals for Glebe House set out to create a scheme of high-quality design and materiality that compliments the urban design strategy for the site, which will seek to sensitively restore Glebe House and rejuvenate its surrounds while increasing the permeability of the development site by forming new quality links to Crumlin Village and the local area. A series of legible spaces with an increasing level of privacy will begin at a newly created pocket park forming a public open space to the front of Glebe House, gradating to more semi private and private open spaces within the context of the new residential blocks, with communal open spaces comprising an over podium garden & open space to the rear of Block A.

2.2 Glebe House Pocket Park POS

The public open space located at the site's northern boundary with St Agnes Road will act as an attractive entryway to the proposed residential development and help link the newly restored Glebe House back into Crumlin Village. Consisting of a series of attractive outdoor spaces and permeable links, unified by a palette of high-quality materials and furniture fittings. Three of the existing category B mature trees along the northern frontage of the site will be retained while the category C tree will be replaced with a large Horse Chestnut to soften the view of the site from the adjacent street. The existing stone wall boundary will be retained and made good in order to maintain the local character and materiality found within the Crumlin area.

The centre of the open space, directly adjacent to the front of Glebe House, is formed by a formal lawn area to lend a sense of historical significance to the period house. The perimeter of the formal lawn is enclosed by a band of stone paving to provide the space with the quality of distinctiveness from the rest of the landscape. A large specimen Oak is proposed for the eastern corner of the formal lawn to act as a central focal in the open space and the main pedestrian access route. An area of golden, firm gravel bookends the northern side of the lawn, providing a favourable, south-orientated space for sitting. The feature benches are proposed to be a contemporary take on the typical park benches found throughout Dublin's Georgian parks. A series of large format stone paving stepping stones acts as an informal access across the lawn.

A generous area of planting will be located directly adjacent to the formal lawn to act as a physical and visual buffer to the main vehicle access road. The planting will be composed of ornamental grasses and perennial mixes, providing both visual interest and for biodiversity, through the inclusion of pollinator friendly species. Formal blocks of clipped evergreen hedging situated within the planting beds, will provide structure and form throughout autumn and winter. Further formality and structure will be achieved through the placing of a row of pleached Lime trees to the rear of the planting. Towards the rear of Glebe House, a potager-style garden with fragrant herbs and lavender planted beds will provide a sensory garden experience for residents. There are 76 guest bicycle stands throughout the open space of the development in easily accessible areas; 54 in COS and 22 in POS. Bicycle parking is excluded from Open Space calculations.

2.3 Plaza Space & Café Terrace

The proposed development will seek to improve permeability through the forming of a new pedestrian route linking Somerville Drive to St Agnes Road/ Crumlin Village. This proposed route will bring pedestrians along the eastern boundary of the site by one of the new pavilion buildings flanking Glebe House. A newly formed plaza along this route will act as an additional public space to the formally laid out pocket park to the front of Glebe House. The plaza, which will have a mainly hard standing surface, will add a further dimension of program and use to the proposed public open spaces, with both a ground floor crèche garden and café terrace facing directly on to it. The crèche garden will be surfaced in artificial turf grass that will be enclosed by a 2.0m high timber fence and hedging. The crèche operator will provide play pieces within the garden. The plaza, which will be gate controlled after hours, will be animated through regular use, provide opportunity for social engagement and respite through public seating and will be lit to provide a safe secure walking route for residents and the wider community.

2.4 Somerville Drive

To further improve the pedestrian connectivity from Somerville Drive, through the site and beyond to Crumlin Village, the existing grass verge on the western side of Somerville Drive is proposed to be replaced with a public foot path which will link to the existing foot path at Somerville Drives small open space. Amenity planting consisting of small flowering trees, clipped hedging and ornamental grasses & herbaceous perennial planting is proposed along the back of the new public foot path, and, in addition to the newly proposed plinth wall and railing, will act a soft landscape buffer between the public realm and the ground floor units, creating a front garden type feeling in keeping with the existing residential street.

2.5 Above-Podium Garden

A generous quantum of Communal Open space will be provided to the future residents of the proposed development through the creation of an Over Podium Garden Space. The Podium Garden, which will be over looked on two sides by residential units within Block B, will also have a direct link at 1st floor level to the adjacent Block A, through a bridge walkway. The Podium Garden will also be accessible from ground level via a set of steps. The proposed podium space will offer residents a safe and attractive garden area with high quality planting, seating areas, formal lawn and a younger children's play area of some 95 square metres. Elsewhere, opportunity for additional, unstructured play is provided within the secondary communal open space at Block A.

To address concerns for overlooking into the rear gardens of the neighbouring properties of Somerville Green, the Podium Garden is proposed to have a setback from the site's western boundary of approx. 7m. To further mitigate any overlooking concerns,
the western edge of the podium is formed of a generous bank of planting creating an attractive, planted frame to the podium garden. Additional planting structure will be achieved through planting of multi stem, small flowering trees.

2.6 Block A Communal Garden

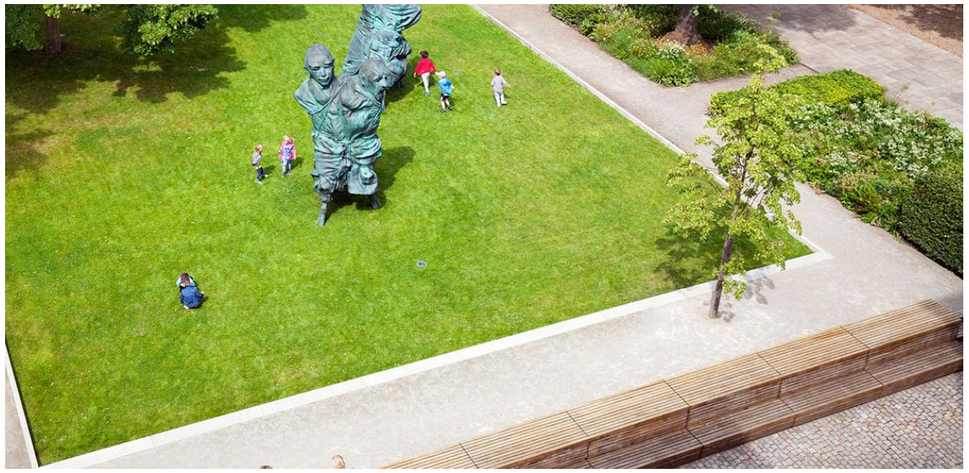
A secondary communal open space, of approximately 396 square metres, is proposed to the rear of Block A. As a reference to the former orchards of the Glebe House rectory which occupied the lands at this end of the site, this space will consist of an open lawn, with a grid of ornamental fruit trees.

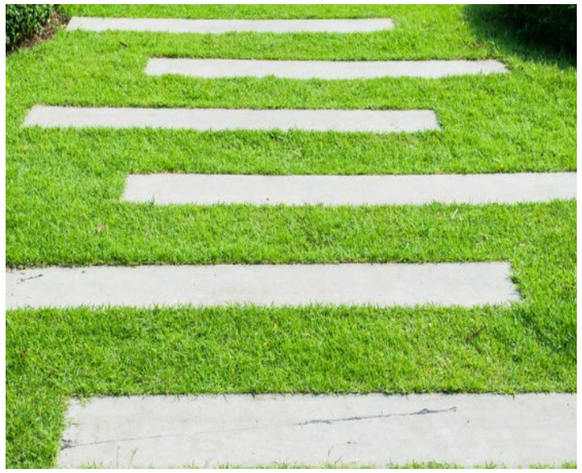
Stepping stones set within the lawn, timber cube seating and timber 'stepping stones will provide a playful element to the open space, presenting opportunities for informal play. The communal open space will be secured, enclosed within the development's boundary and overlooked from surrounding apartments.

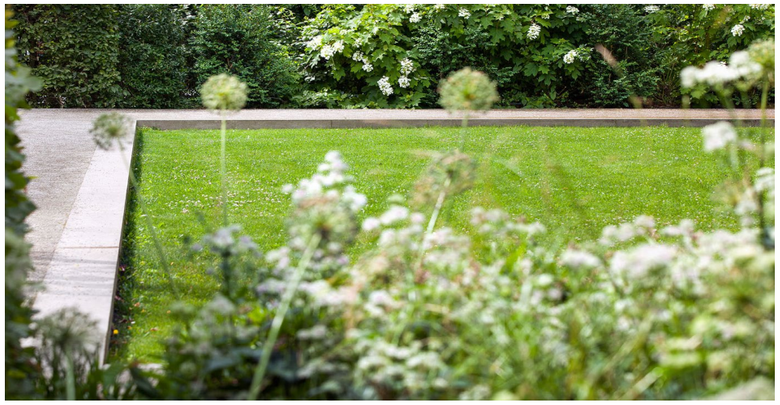
The formal grid of trees will be under planted with swathes of spring flowering bulbs providing seasonal interest, and a large specimen tree will anchor the lawn in one corner, providing a focal point.

2.7 Existing Tree Rationale

In line with Dublin City Council's Policy CHC7, all trees which contribute to the character and appearance of the Conservation Area will be safeguarded. In exception, the rationale for the removal of the existing trees 1574 and 1578 is due to signs of decay on tree 1574 and its potential structural weaknesses at points attached to the trunk, as highlighted in the accompanying Arborists report. Tree 1578 also shows signs of decay, and its long-term potential has been significantly reduced by large pruning cuts on the trunk of the tree. Given tree 1574's position abutting the western boundary wall, and tree 1578's close proximity to St Agnes Road and the public footpath, the removal of these existing trees has been deemed acceptable.







Left to right:

1. Formal lawn framed with stone trim
2. Large format paving stepping stones set into formal lawn
3. Bespoke timber park benches
4. Structural / ornamental grasses and perennial planting mix
5. Pleached trees planted within herbaceous / perennial planting mix
6. Clipped box hedging with bulb planting

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3.0 Public Open Space - Landscape Plan

Cargo bicycle parking spaces: 2 spaces

Creche Garden

Outdoor café terrace with movable tables and chairs

Granite paving with bands of granite setts or similar

Planting bed bookended by timber cube seating

Existing boundary wall

PC Concrete paving

Band of stone setts

Bicycle parking

Large species specimen tree

Formal border with ornamental grasses & perennials mix

Bespoke bench seating

Newly formed pedestrian link gateway

Existing Category C tree to removed and be replaced with large specimen Horse Chestnut tree

Bicycle parking

Reinforced grass surface to emergency vehicle overrun

Potager-style garden with herb and lavender planting

Precast / In-situ concrete footpath

Controlled gate access

Planted border with shade tolerant mix

Proposed 450mm high plinth wall with stone facing and capping to parking bays

Large format stone paving stepping stones

Formal line of pleached trees

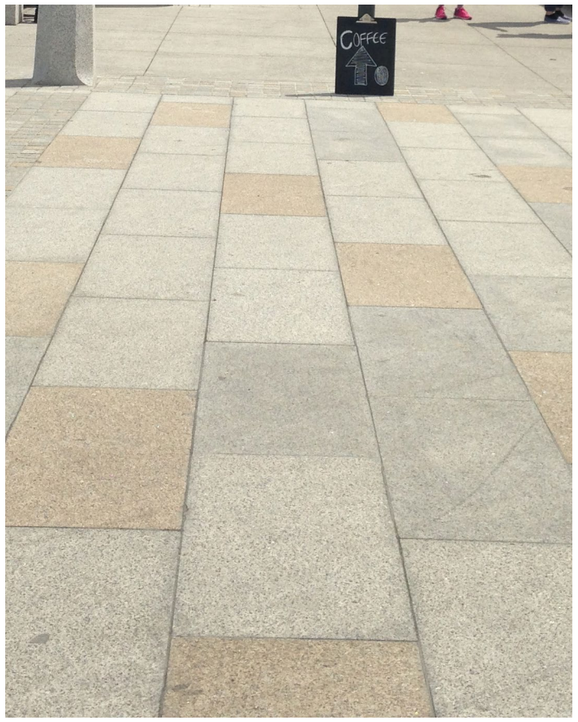
Blocks of clipped hedging

Existing category B trees to be retained

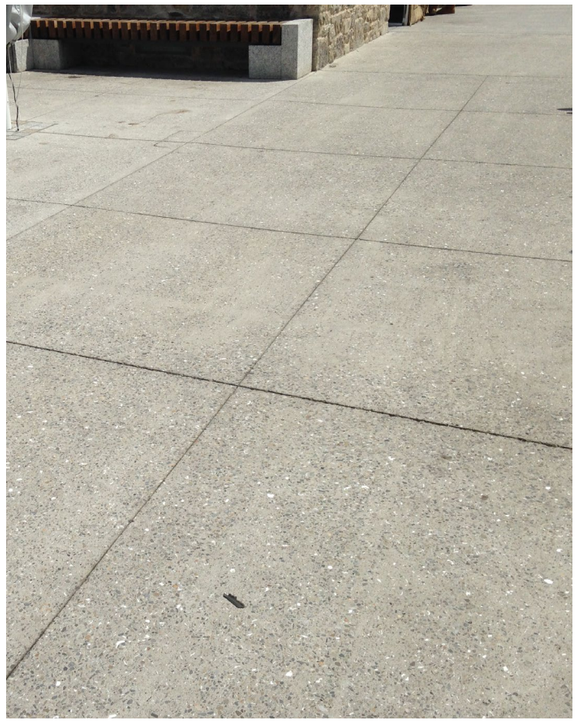
3.1.0 Public Open Space - Hard Landscape Materials & Furniture

Ballylusk gravel

Granite setts or similar



Granite paving or similar



Exposed aggregate concrete

Pre-cast concrete paving - Grange granite aggregate paving by Kilsaran

'Sheffield' Cycle Stand or similar

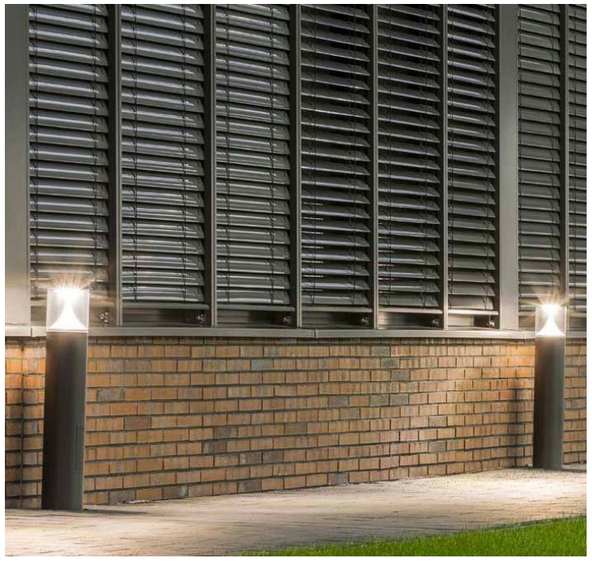
Bespoke Timber Bench - Merrion Square, Dublin.

3.1.1 Lighting

Post-Top Luminaires

Lumantix Z LED post-top luminaire by Trilux or similar

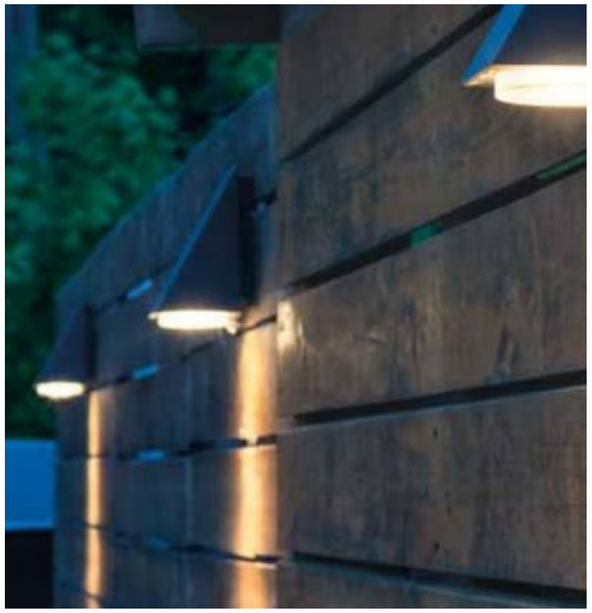
Bollard Luminaires



8841 LED Bollard by Trilux or similar

HS 80 LED Bollard by Trilux or similar

Wall-Mounted Luminaires



HS I Wall-mounted luminaire by Trilux or similar

Skeo Q Wall-mounted luminaire by Trilux or similar

3.1.2 Public Open Space - Perspective View

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3.2 Above-Podium Garden - Landscape Plan

Tree planter with hardwood timber edge seating

Composite timber decking

Iroko timber recliners

Mound with herb and lavender planting mix and semi-mature trees

Shade tolerant planting mix with a line of evergreen hedging

Feature tree

Paving Flags: Kilsaran 'Shelbourne Flag'

Balustrade to Architect's detail and specification

Mound with grasses & perennials mix with small flowering trees

Formal lawn area

1.1 m high round-top railing

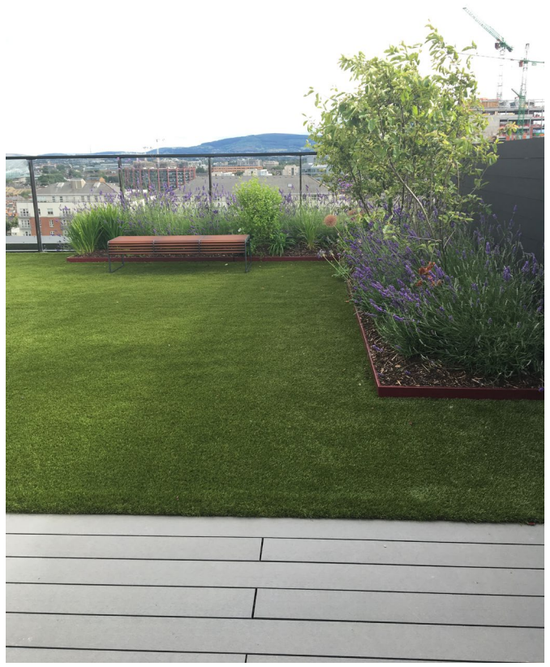
Play area with soft-fall surface and play equipment, approx area 120 sqm

Tree planters: "s57 planter" by Omos or equivalent.

Evergreen hedging

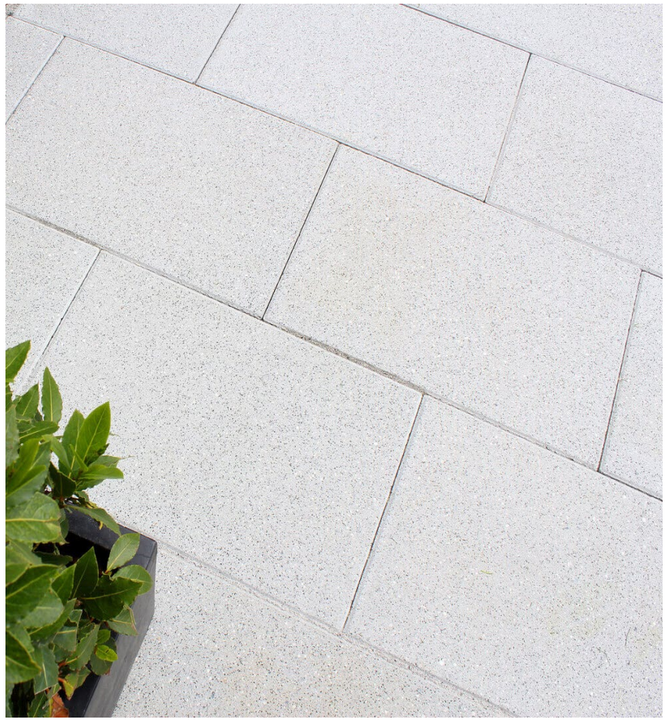
Scale 1:150

3.2.1 Above-Podium Garden - Landscape Materials & Furniture



Artificial lawn turf, decking & planting on roof garden

Over podium planting with localised mounding for trees



High quality, reconstituted stone finish Paving

Soft fall play surfaces

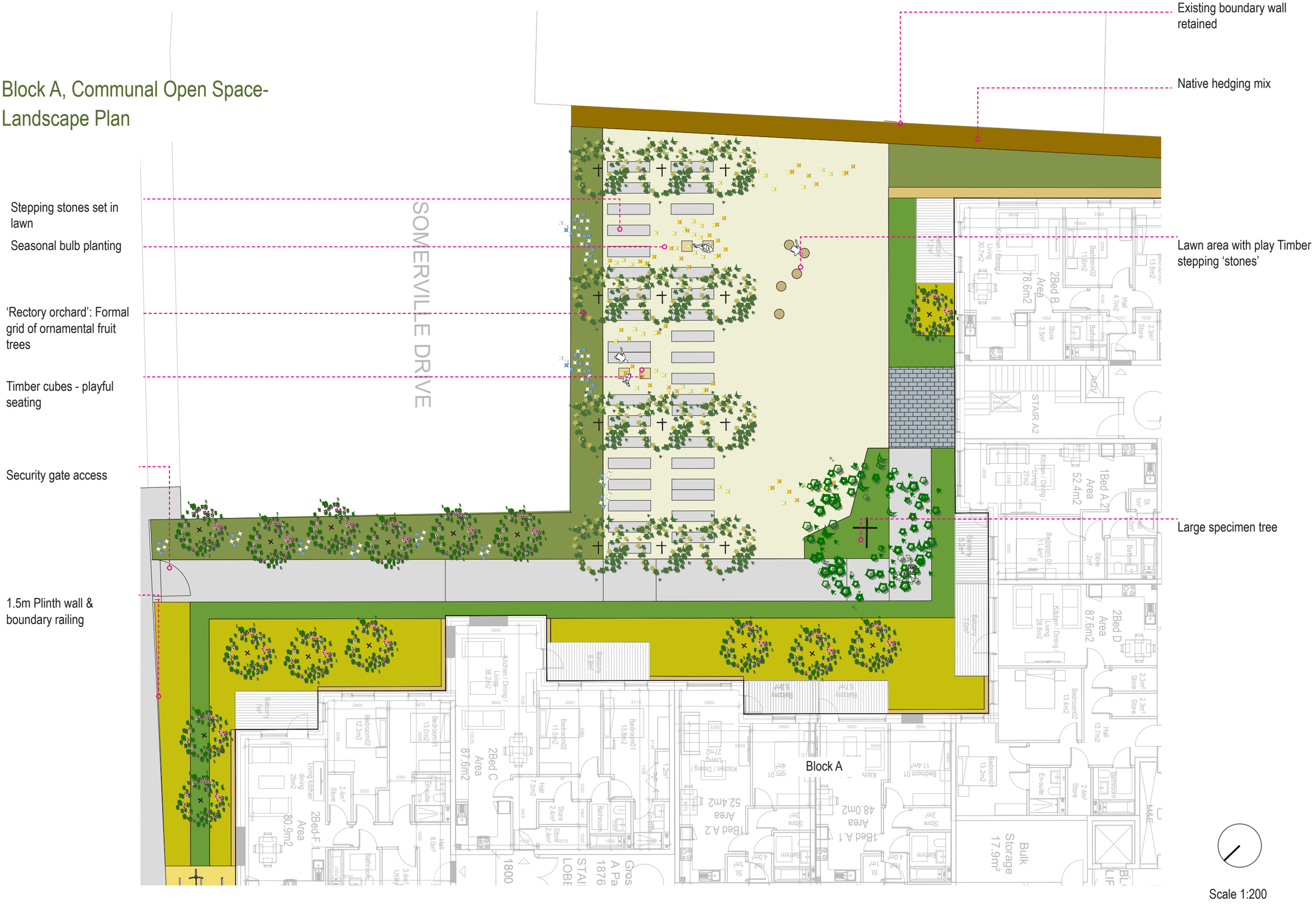
Omos s57 planter with Iroko timber bench

Streetlife Rough & Ready Lounger

Springer by Kompan

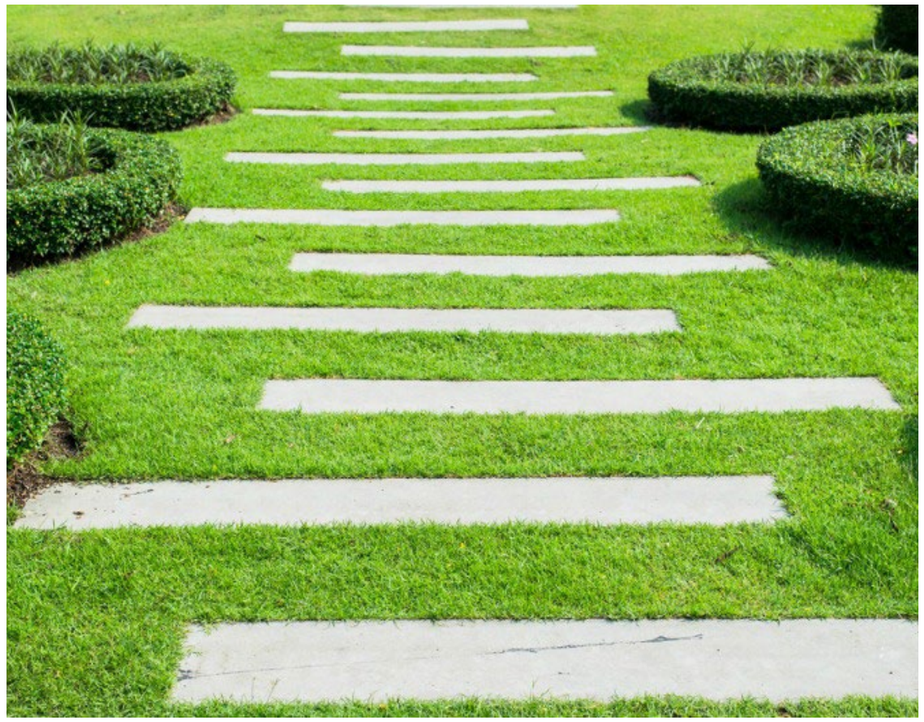
See-saw by Kompan

3.3 Block A, Communal Open Space-Landscape Plan



3.3.1 Block A Communal Open Space - Landscape Materials & Furniture

Formal grid of trees

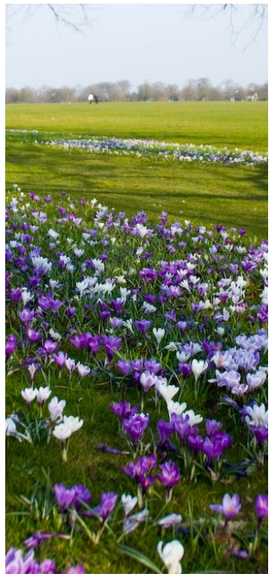


Stepping stone paving

Timber cube seating

Cycle Stands on firm gravel surface

Galanthus nivalis - Common Snow Drop



Crocus

Narcissus - Daffodil

Hyacinthoides non-scripta - Common Bluebell

4.0 Soft Landscape Materials

Perennial / Grasses Planting Arrangement



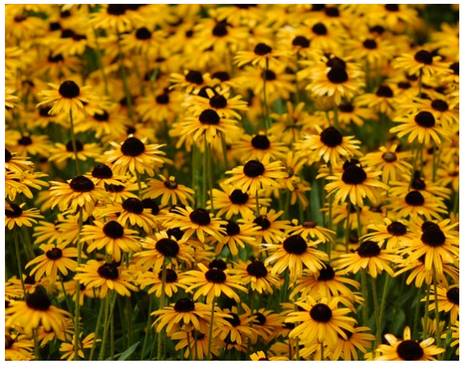
Clipped Evergreen Hedging


Prunus lusitanica


Buxus sempervirens

Ornamental Grass and Herbaceous Mix


Chionochloa flavicans


Rubeckia fulgida 'Goldstrum'


Nepeta faassenii


Verbena bonariensis


Allium schoenoprasum

Shade Tolerant Mix


Astilbe chinensis


Brunnera macrophylla


Rodgersia pinnata


Asplenium scolopendrium


Sarcococca hookeriana

Native Hedging Mix


Ilex aquifolium

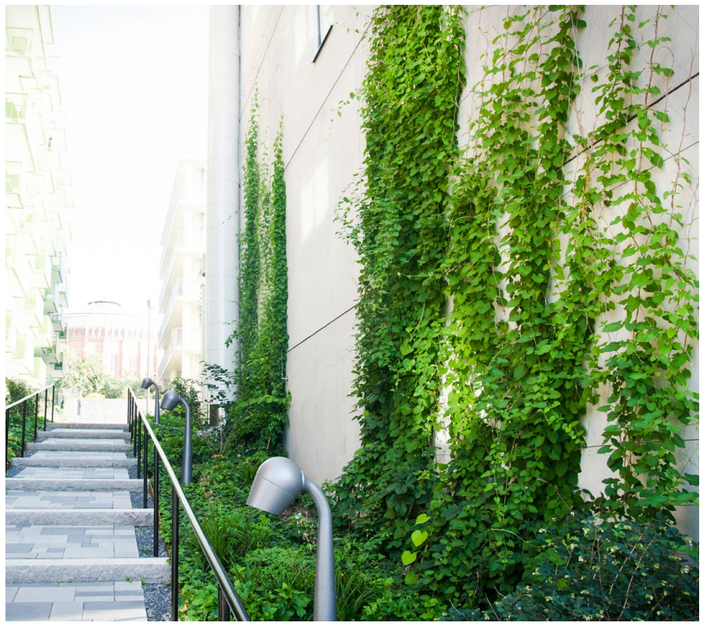

Rosa canina


Crataegus monogyna

Tension wire support + climber planting


Climbers trained on stainless steel trellis


Wisteria sinensis trained on stainless steel trellis

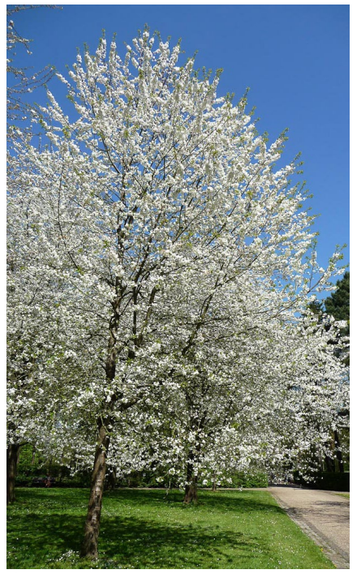

Climber planting

Semi-Mature & Extra Heavy Standard Trees


Tilia europaea (pleached)


Tilia cordata 'Greenspire'


Betula pendula


Prunus avium

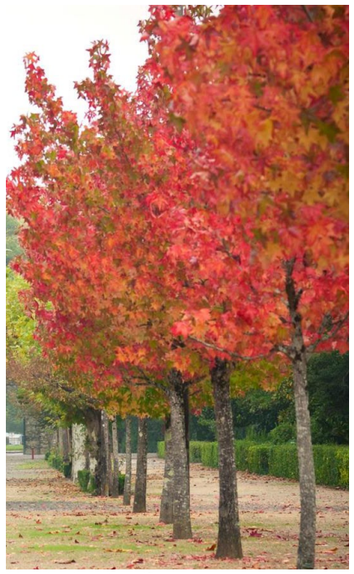

Pyrus calleryana 'chanticleer'


Aesculus hippocastanum

Small Flowing Trees


Malus 'Evereste'


Acer campestre 'Elsrijk'


Liquidambar styraciflua


Amelanchier lamarkii


Magnolia kobus


Prunus serrulata

5.0 Proposed Planting Schedule

Specimen Semi Mature Tree Planting

Horse Chestnut	*Aesculus hippocastanum*, 4 x tr., 30-35cm g., wrb, 4.0-5.0m h., 2.0m s
Tulip	*Liriodendron tulipifera*, 4 x tr., 30-35cm g., wrb, 4.0-5.0m h., 2.0m s
Swamp Spanish Oak	*Quercus palustris,* 4 x tr., 20-25cm g., wrb, 4.0-5.0m h., 2.0m s
Sweetgum	*Liquidambar styraciflua,* 4 x tr., 30-35cm g., wrb, 4.0-5.0m h., 2.0m s

Semi Mature & Extra Heavy Standard Tree Planting

Field Maple	*Acer campestre* 'Elsrijk', 3 x tr., 18-20cm.g, 4.0-5.0m h., 1.5m s..
Silver Birch	*Betula pendula*, standard, 3 x tr., 18-20cm.g, 4.0-5.0m h., 1.5m s..
Sweetgum	*Liquidamber styracifula*, 3 x tr., 18 -20cm g., 4.0-5.0m h., 1.5m s.
Crab Apple	*Malus 'Evereste'* 3 x tr.,18 -20cm g., 4.0-5.0m h., 1.5m s.
Magnolia	*Magnolia × loebneri* 'Merrill', 4 x tr., 18-20cm g., wrb, 4.0-5.0m h., 2.0m s.
Wild Cherry	*Prunus avium*, 3 x tr., 18-20 cm.g, 4.5-5.0m h., 1.5m s
Pear	*P. calleryana 'Chanticleer'*, 3 x tr., 18-20cm.g, 4-5-5.0m h, 1.5m s

Semi Mature Pleach Tree Planting

Lime	*Tilia europaea, pleached; 3 x tr., 20-25 cm.g, 4.0-5.0m h., 1.0x1.0x1.0m cube*

Small trees/ specimen shrubs

Amelanchier lamarkii, multi stem min 5 breaks, 2 x tr, wrb, 2.0-2.5m h.,1.5m s.
Magnolia 'Kobus', multi stem, min 5 breaks, 2 x tr, wrb, 2.0-2.5m h, 1.5m s.
Malus sylvestris, multi stem, min 5 breaks, 2 x tr, wrb, 2.0-2.5m h, 1.5m s
Prunus serrulata c vars, multi stem, min. 5 breaks, 2 x tr., wrb, 2.0-2.5m h., 1.5m s.

Ornamental Grass and Herbaceous Mix

Grasses :
Stipa calamagrostis, 3 ltr.
Chionocloa flavicans, 3 ltr.
Calamagrostis acutiflora 'Karl Foerster' 3 ltr.
planted 3-5 per sqm (aggregate 4/sqm)
Perennial Mix:
Allium schoenoprasum
Acidanthera bicolor 'Murielae'
Campanula rapido
Cirsium rivulare 'Atropurpureum'
Echinops ritro c.vars
Euphorbia amygdaloides
Echinacea purpurea
Helleborus foetidus
Rudbeckia fulgida 'Goldsturm'
Nepeta faassenii
Salvia var.
Sedum telephium
Verbena bonariensis 'Lollipop'
All 2 ltr. cg., planted, 3-5 per sqm (aggregate 4 per sqm)

Bulbs:
Tulipa 'White Triumphator'
Allium 'Globemaster'
Planted as bulbs, top size, 3 per sqm.

Hydrangeas:
Hydrangea arborescens 'Anabelle'
Hydrangea macrophylla 'Lanarth White'
Hydrangea paniculata 'Limelight'
All 7.5 ltr. cg., planted, 4 per sqm

Shade Planting Mix
All 2ltr. cg, planted in drifts of 5-7 plants at 7 per sq
Rodgersia pinnata
Rodgersia podophylla
Rodgersia pinnata 'Fireworks'
Asplenium scolopendrium
Polystichum setiferum
Athyrium filix-femina
Sarcococca hookeriana
Brunnera macrophylla
Pulmonaria officinalis
Alchemilla mollis
Astilbe chinensis

Sensory Planting
All 2-5 ltr.cg. planted at 400-500mm centres:
Artemesia absinthium
Helichrysum-italicum
Lavandula angustifolia c.vars
Origanum majorana 'Aureum'
Rosmarinus officinalus c.vars
Salvia argentea
Thulbaghia violacea

Bulb Planting
Planted as bulbs, topsize, sown in drifts of 15-20 bulbs per sqm

Anemone blanda	
Allium hollandicum c. vars	
Narcissus c. vars (3 approx.)	Daffodil
Tulipa 'White Triumphator'	Tulips
Hyacinthoides non-scripta	Common Bluebell
Camassia c. vars (3 approx.)	Camas
Crocus c. vars	Crocus
Galanthus nivalis	Snow Drop

Climbers:
3.0-3.5m height at installation at 500-1000mm centres across width of trellis support.

Clematis armandii
Parthenocissus tricuspidata
Wisteria sinensis

Native Hedging Mix
B.R 90-120 cmh. planted double staggered row at 500mm centres
Crataegus monogyna
Lonicera periclymenum
Prunus avium
Prunus spinosa
Ilex aquifolium
Viburnum opulus
Rosa canina

Clipped Evergreen Hedging
Buxus sempervirens
Ilex 'Alaska'
Prunus lusitanica
Taxus bacatta
5 ltr.cg. planted at 500mm centres

Turfgrass

10% Highland Browntop Bent	*Agrostis castellana*
10% Browntop Bent	*Agrostis capillaris*
40% Meadow Fescue	*Festuca pratensis*
40% Red Fescue	*Festuca Rubra*

Pollinator Friendly Planting

The decline of wild bees and pollinators that is evident in Ireland can have implications for food production and gardens, as many plants are reliant upon pollinators for the transfer of pollen from one flower to another and to set fruits and seeds. This makes the planting of pollinator friendly species increasingly important. In order for bees to have a healthly balanced diet and to survive throughout their life cycle, they need to be able to feed on pollen and nectar from a range of different flowers from early spring to autumn. Perennial plants provide good sources of nectar and pollen for bees and can have a strong visual impact with colourful and attractive displays over a long period of time. In addition they also provide habitats and nesting material for birds and insects. Many of the suggested species shown below have been chosen from the plant lists from the Pollinator Friendly Planting Code . It is recommended to also include grass species within the planting mix in order to provide structure and colour throughout the autumn and winter months.

Species proposed within the pollinator planting mixes are:

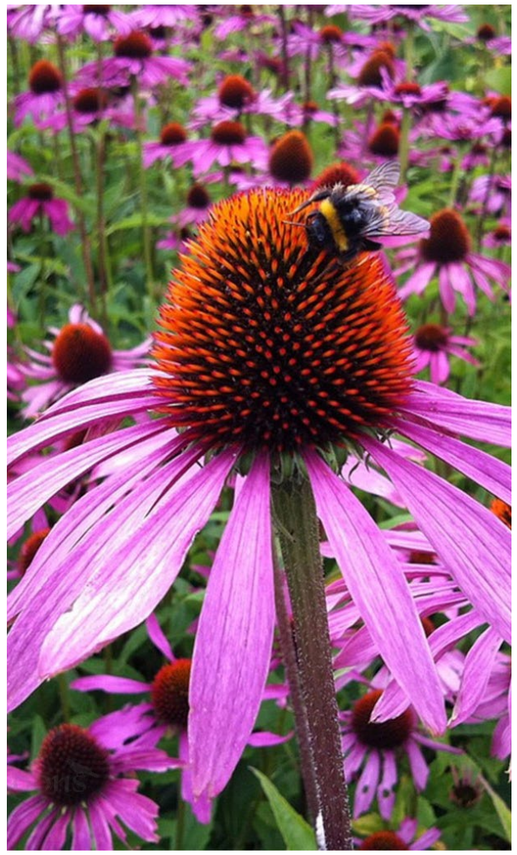
Perrenials
Aster var.
Allium schoenoprasum
Campanula rapido
Cirsium rivulare 'Atropurpureum'
Echinops var.
Euphorbia amygdaloides
Echinacea purpurea
Helleborus foetidus
Knautia macedonica
Nepeta faassenii
Rudbeckia fulgida
Salvia var.
Sedum telephium

Shrubs
Hebe var.
Hydrangea paniculata
Lavandula angustifolia

Trees
Malus domestica
Prunus avium
Pyrus calleryana


Euphorbia amygdaloides


Crocus var.


Echinacea purpurea


Knautia macedonica


Echinops var.


Rudbeckia fulgida


Nepeta faassenii


Campanula rapido


Hydrangea paniculata


Salvia var.


Allium schoenoprasum


Helleborus foetidus


Malus domestica


Aster var.


Lavandula angustifolia


Sedum telephium


Hebe var.


Cirsium rivulare ‘Atropurpureum’

6.0 Open Space Diagram

Public Open Space

Communal Open Space

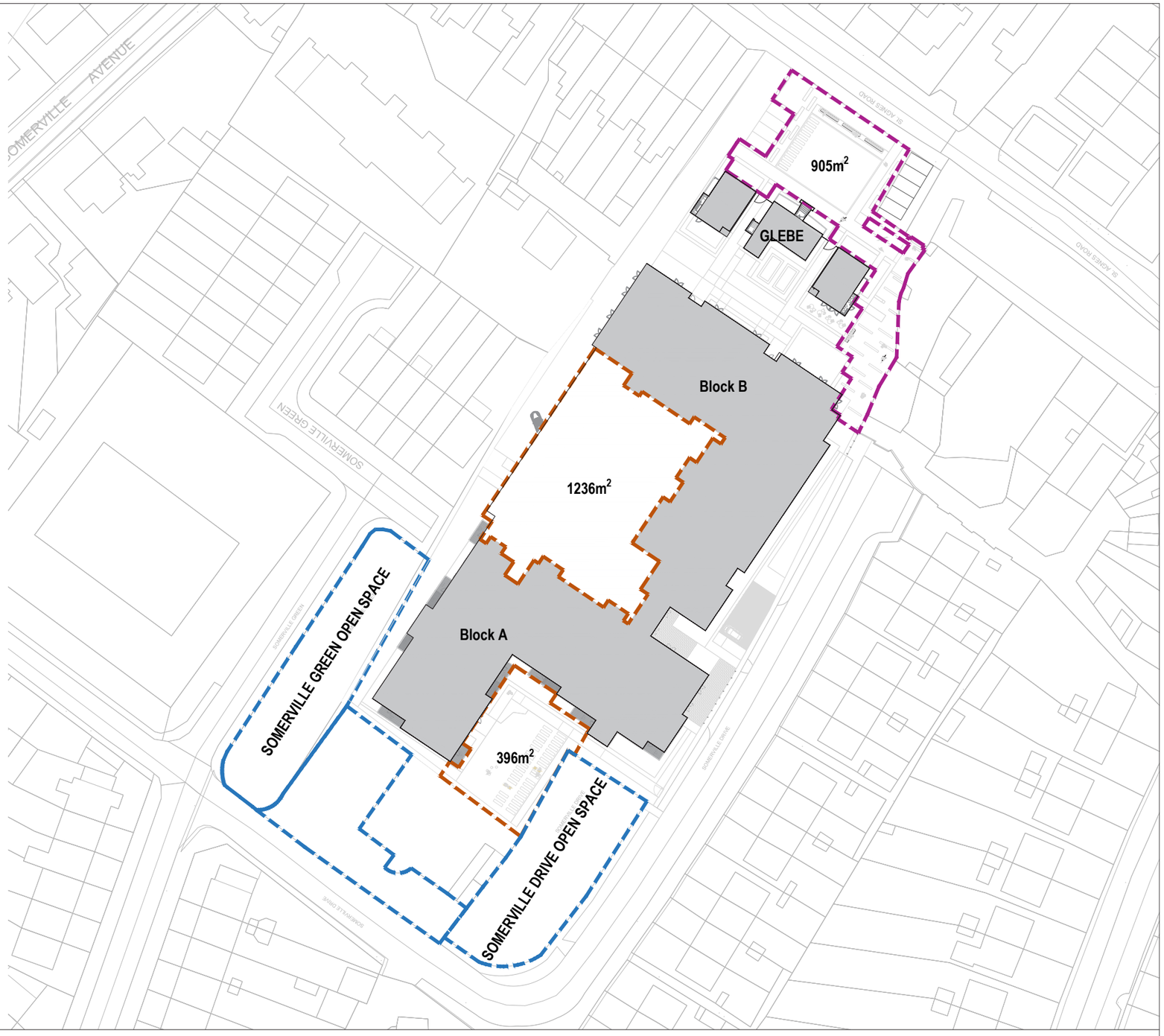
Existing Open Space Adjoining Site

Open Space Category	Requirement	Provision under application
Public Open Space	10% (878m^2)	10% (905m^2)
Communal Open Space	10% (910m^2)	21% (1,632m^2)
Green Buildings		
Green Roofs	70% min. of flat roofs	81.5% (2,151m^2)
Vertical Greening	N/A	N/A
Recreation		
Children's Play Space	(85-100m^2)	1.3% (120m^2)
Play Units / Elements	N/A	5

Communal open space is provided in the form of centrally located landscaped podium courtyard, which is accessible from both apartment buildings. Communal landscaped areas at ground level are also provided. A dedicated area on the podium is provided for play equipment within sight of the apartment building and ensure informal supervision by residents. These open space gardens are designed as soft and/or hard landscaped with appropriate plant species and landscaping materials as per the landscape architect's strategy.

Public open space as per the new residential developments guidelines, 10% of the site area shall be reserved. The public open space is well located in the development and easily accessed by the wider population. Various visual breaks between the pavilion buildings and Glebe House to the apartment block behind will ensure informal supervision of this space by residents. Existing features, such as mature trees, shall be retained and enhanced by the formal open space provided to the front of the development. This will enhance the setting of Glebe House.

Note: Bicycle parking is excluded from Open Space calculations.



Open Space Plan

7.0 Proposed Boundary Details

L E G E N D

01. Existing stone boundary wall to be retained and made good. Capping to be retained & reinstated at new level.
Historic random rubble.

02. Existing return wall to be lowered to match front wall.
Historic random rubble.

03. New coarsed random rubble stone wall built to match existing historic wall along St. Agnes Rd.

04. Existing boundary wall to be retained and repaired as required.

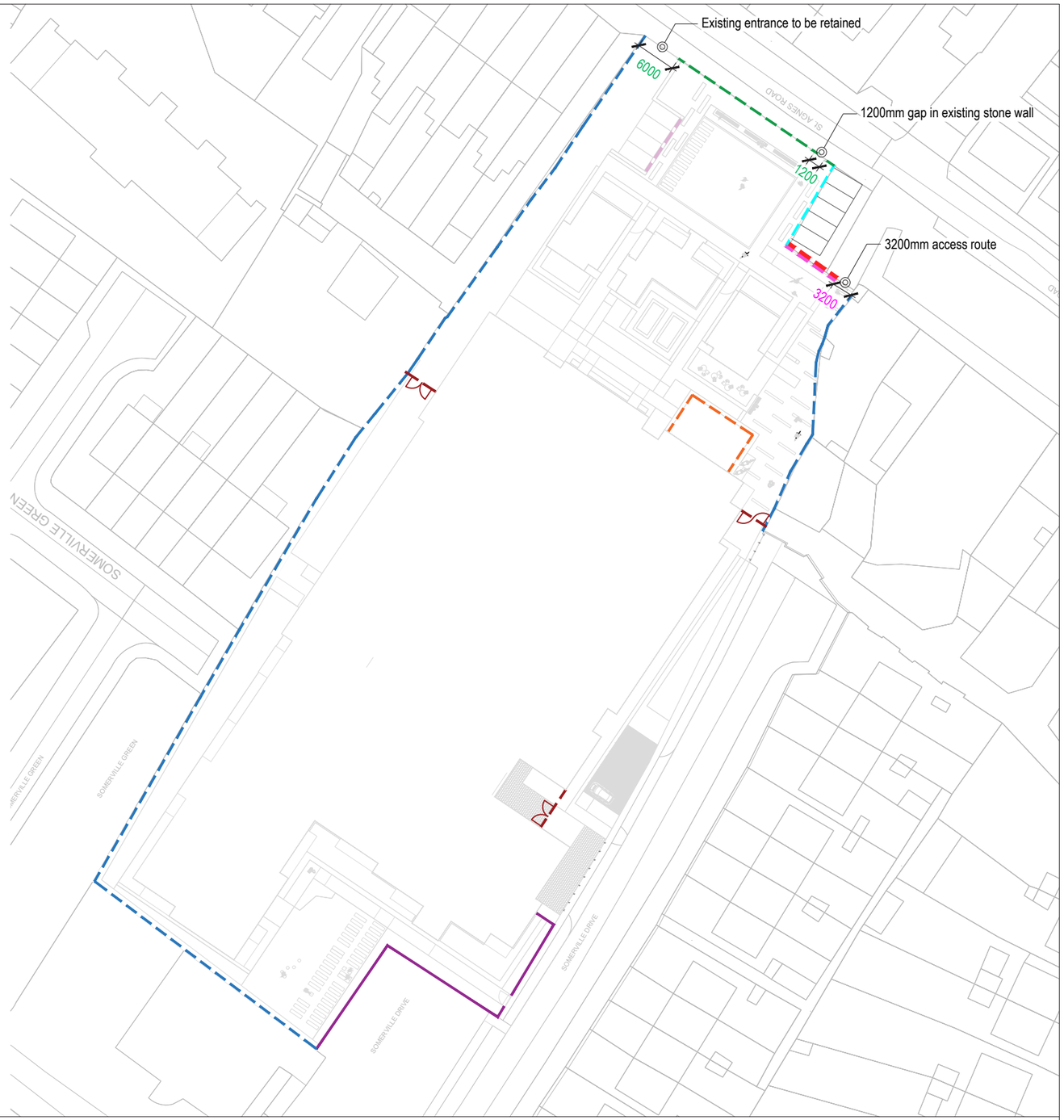
05. Proposed 450mm high plinth wall with stone facing and capping to Northern Parking Bays

06. Proposed 1.2m high boundary brick wall with brick capping and railing

07. Proposed 1.5m high boundary brick wall with brick capping and railing

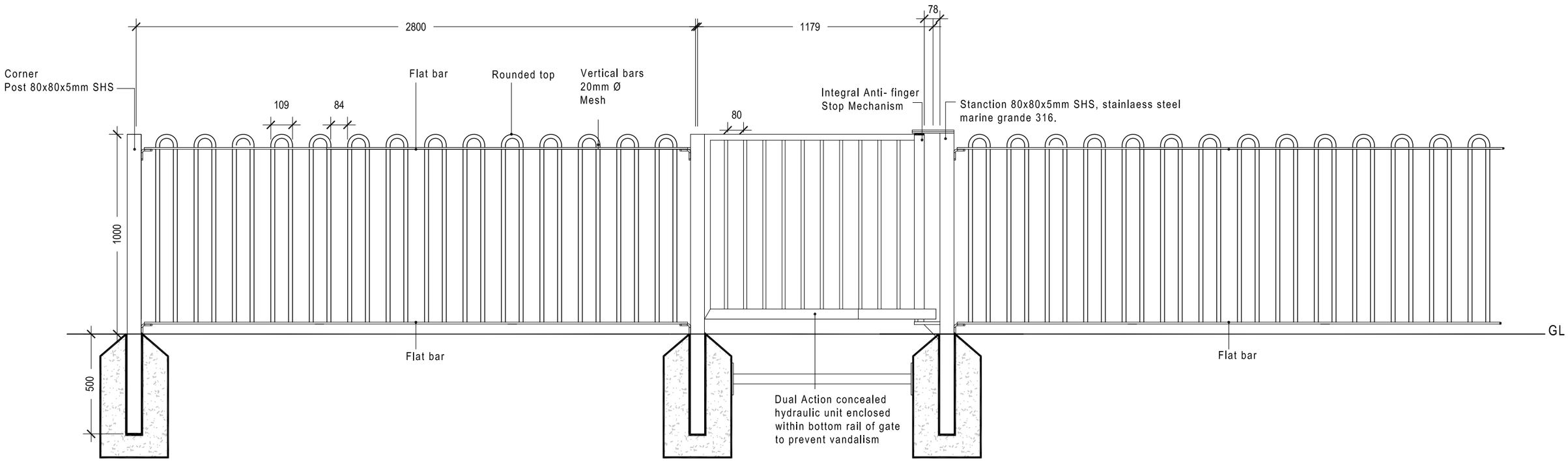
08. Proposed 2.0m high timber fence to Crèche Garden

09. Existing boundary to be removed



Boundary Treatments Plan

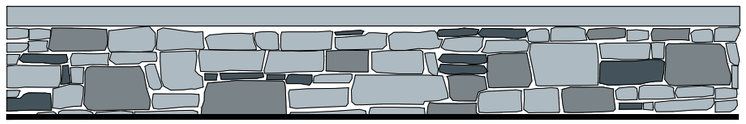
Above-Podium Garden: Playgorund Boundary



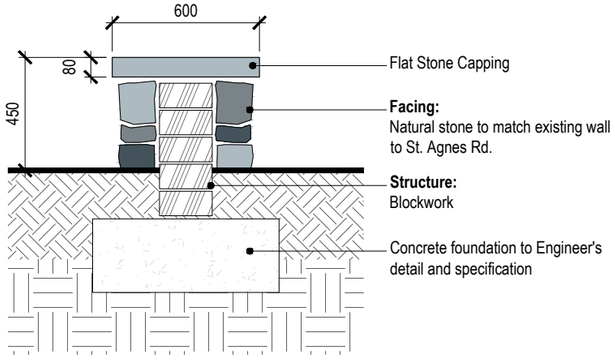
Boundary Detail 00 - Above-Podium Garden Playgorund Boundary

Detail of Round Top Railing & Gate

Scale 1:25



ELEVATION



SECTION

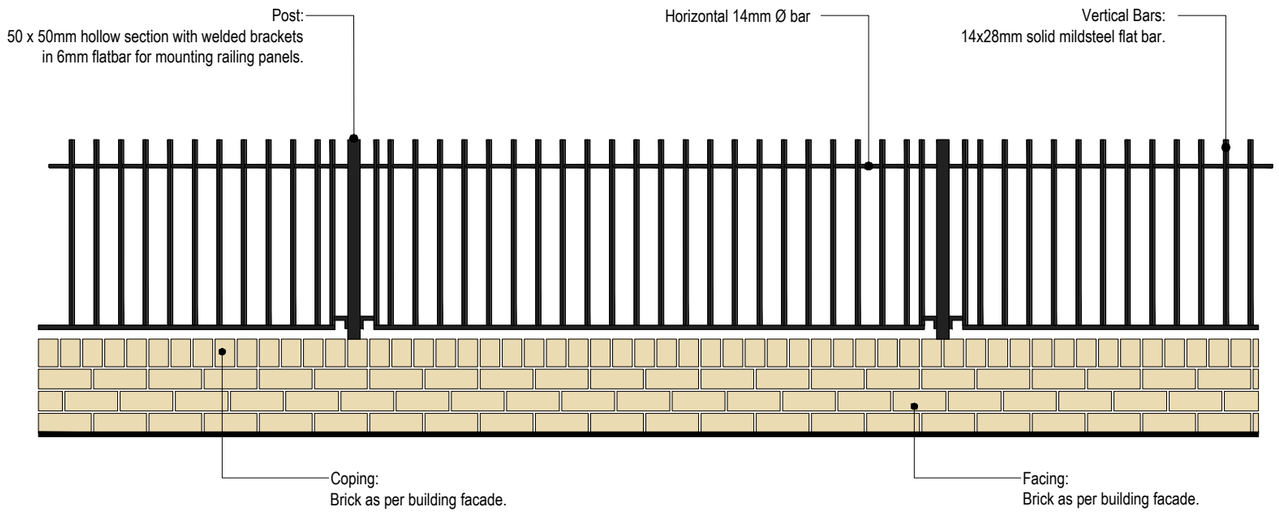
Boundary Detail 05

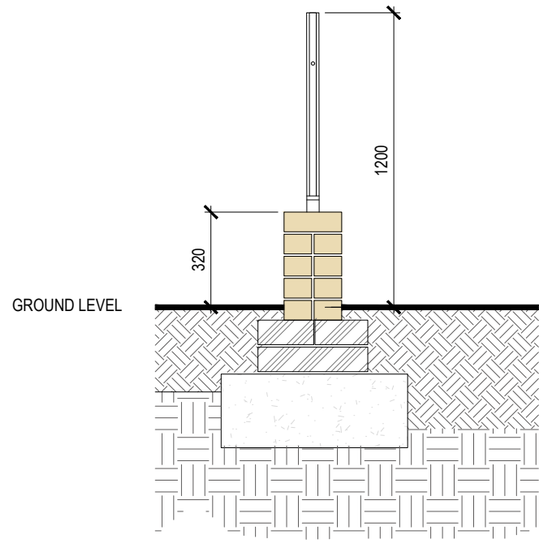
Detail of 450mm high plinth wall with stone facing and capping to Northern Parking Bays

Scale 1:25

NOTES ON RAILINGS:
All mildsteel to be hot-dipped galvanised and powder coated to a selected RAL.

All bolts and fixings to be hot-dipped galvanised/stainless steel.





E L E V A T I O N

S E C T I O N

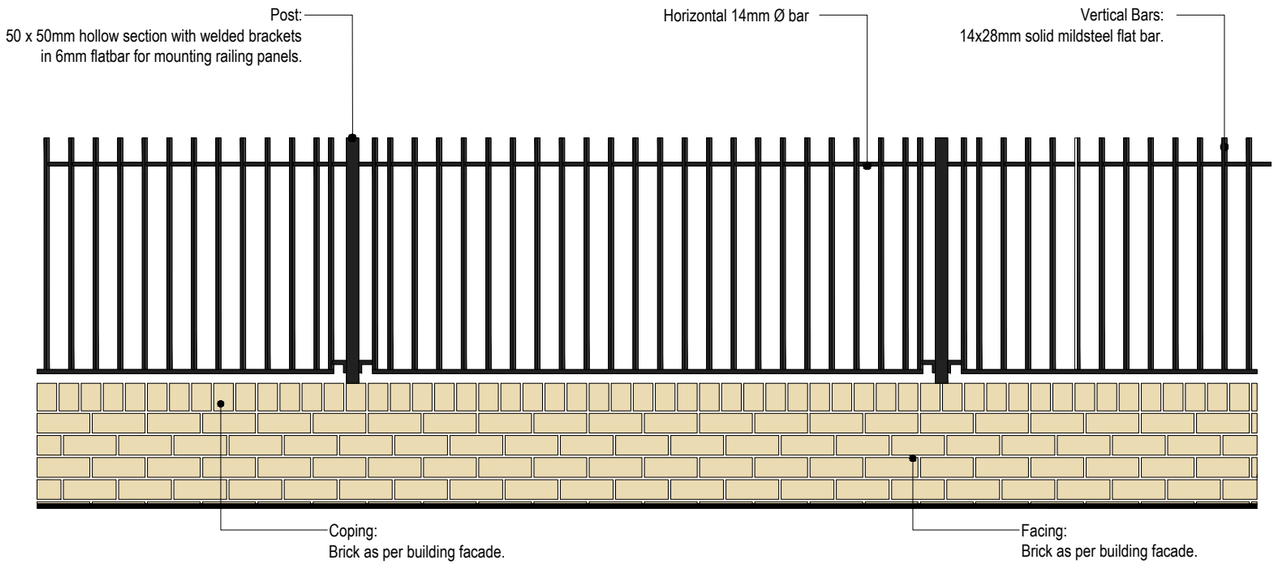
Boundary Detail 06

Detail of 1.2m High Railing & Brick Faced Wall

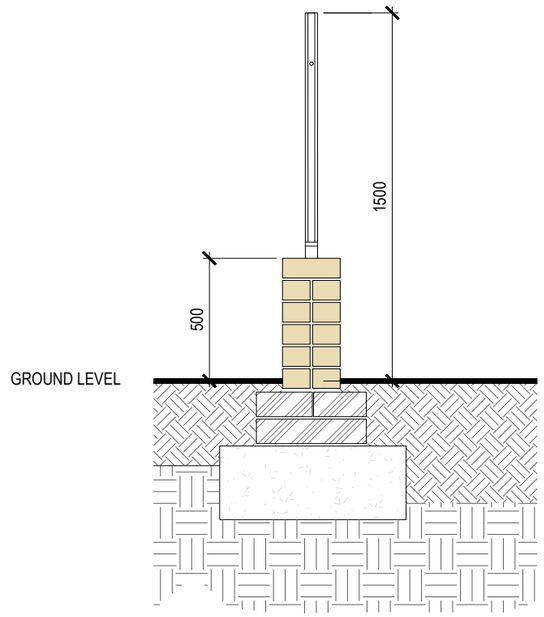
Scale 1:25

NOTES ON RAILINGS:
All mildsteel to be hot-dipped galvanised and powder coated to a selected RAL.

All bolts and fixings to be hot-dipped galvanised/stainless steel.



ELEVATION



SECTION

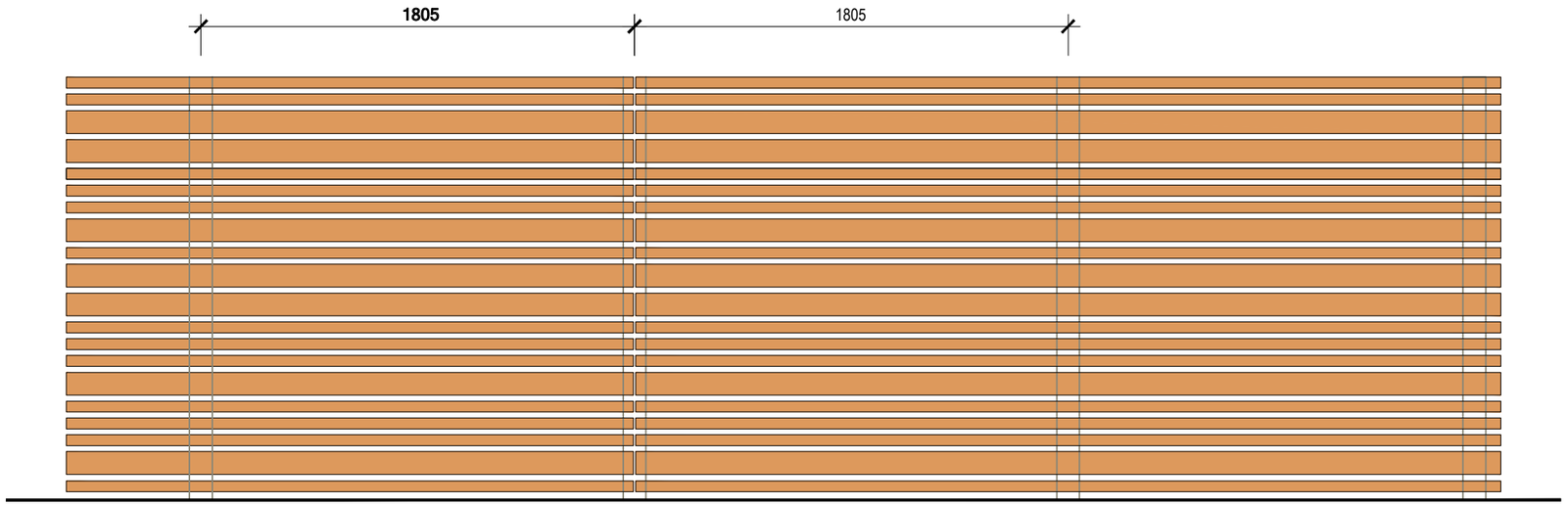
Boundary Detail 07

Detail of Round Top Railing & Gate

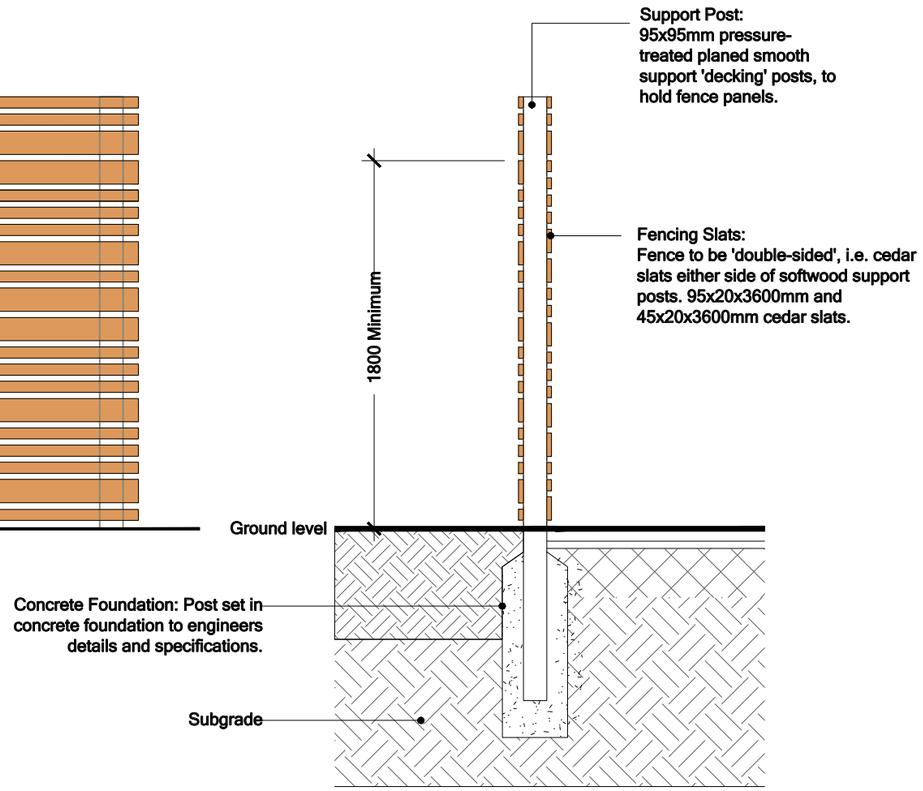
Scale 1:25

NOTES SCREEN FENCING:

- Vertical softwood support posts.
- All softwood timber to be pressure treated.
- All screws, staples, hinges, latches and fixings to be galvanised and nails to be stainless steel.
- Slats to be Western Red Cedar timber



ELEVATION



SECTION

Boundary Detail 08

Detail of Timber Fence

Scale 1:25

8.0 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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