

Transitional Care Facility at Unit 21  
First Avenue, Cookstown Industrial  
Estate, Dublin 24

Landscape Report

Register Ref: SDZ20A/ 0011  
Clarification of Further Information Response

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Revision	Date	Description	Approved
- P01	01.02.2023	First Issue For Additional Information	RJ
- P02	25.04.2023	Additional Information Clarification	RJ

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

DR-300 Overall Landscape Plan

DR-301 LAP Neighbourhood Pocket Park - Indicative Plan

DR-340 Landscape Sections

## Contents:

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## 1.0 Site Context

### 1.1 Site Location

The site is situated within the Cookstown Industrial Estate, north of the town centre of Tallaght, Dublin 24, approx. 9km southwest of Dublin City Centre. Cookstown Estate has direct frontage to the Belgard Road and adjacent to the M50 motorway with direct motorway access to all national arterial routes. Located approx. 500m from the site, 'Belgard' Red Line Luas station provides a direct service to Dublin City Centre, with a travel time of about 25 minutes to Heuston Station. Dublin Bus services both the surrounding suburbs and Dublin city centre, while the M50 motorway is situated less than 1.7km from the subject site. There is a wide selection of schools and supermarkets within the local area. The Square Tallaght is an approx. 20min walk from the site, Belgard Retail Park is an approx. 15min walk and TU Dublin Campus is an approx. 15min walk.

### 1.2 Existing Site Condition

The 1st Avenue Transitional Care Facility development site is approximately 0.75 hectares in area and currently comprises of a vacant one / two - three storey commercial units, a number of smaller structures/ units along the western boundary, the associated car parking to the north and west boundary, and a small cafe to the eastern boundary. A perimeter planting of mainly mature Poplar trees lines the sites boundaries along both adjacent public roadways. The trees are in an overall poor condition generally with three quarters of the trees comprising Category C or U. For further detail on the existing trees, please see accompanying Consulting Arborist's report and drawings. The site is bounded by First Avenue to the north, Cookstown Road to the east and neighbouring industrial units to the south and west. The site's existing topography sees a fall across the site from a high point of + 103.81m in the north west corner, to a low of +101.75m in the south east corner, a level difference of some 2 metres.



**Note:** Boundary lines shown for illustrative purposes only



NTS



View of site from First Avenue / Cookstown Road roundabout - facing south



Eastern gate site entrance / boundary tree line - facing north



Northern / western car park and boundary tree line - facing west



Overgrown vegetation of bramble, ivy and Buddleia - facing west



Northern controlled gate site entrance / on-site cafe



Northern flat bar railing boundary - facing east



Former commercial offices unit entrance



Industrial warehouse units

## 2.0 Green Infrastructure

### 2.1 Existing On Site Green Infrastructure

The proposed development site has little existing Green Infrastructure, due to its commercial/ industrial land use the site mostly comprises hard landscape areas. The site's main green infrastructural elements are confined to a planter along the south, east and northern boundary. The boundary planter contains an existing tree line of mainly mature Poplar trees which are in an overall poor condition. Elsewhere on site there are some brambles growing on the southern boundary and remnant amenity planted shrubs and over grown bramble in the perimeter and former office entrance planters.



Figure 2.1: 1st Avenue Existing Site

### 2.2 Strategic Green Infrastructure

As outlined in the preceding section, the development site is situated within the Cookstown Industrial Estate, north of the town centre of Tallaght. The estate is currently predominantly comprised of industrial and commercial use and their associate parking and service yard areas. As a result of this historic industrial and commercial, the Cookstown Estate has very little green infrastructure, with the majority of sites mirroring the First Avenue site, with predominantly hard, impermeable surfaces.

When viewed in terms of the County Development Plan and its Green Infrastructure Strategy, the First Avenue site lies between (L8) Tallaght - Rural and Tallaght- Urban Links (Green Infrastructure Strategy Map, Fig 4.4 Dev Plan). To the north lies a green corridor in the context of the Luas Redline to Tallaght/ Saggart, further north beyond Bóthar Katharine Tynan are the mature housing estates of Belgard Heights and Alpine Rise. These residential areas represent a high level of existing green infrastructure within the locality, with mature, 40 year plus aged street and open space trees as well as well-established suburban gardens. As such, the Cookstown Site with its landscape proposals and open space will have viable green infrastructural links to its north and beyond to the (L8) Tallaght – Rural Link.

Moreover, as the Tallaght Town Centre LAP objectives for Cookstown are met through further contiguous development, the proposed development site will form part of that network of greened streets and open spaces - See Figure (2.3)

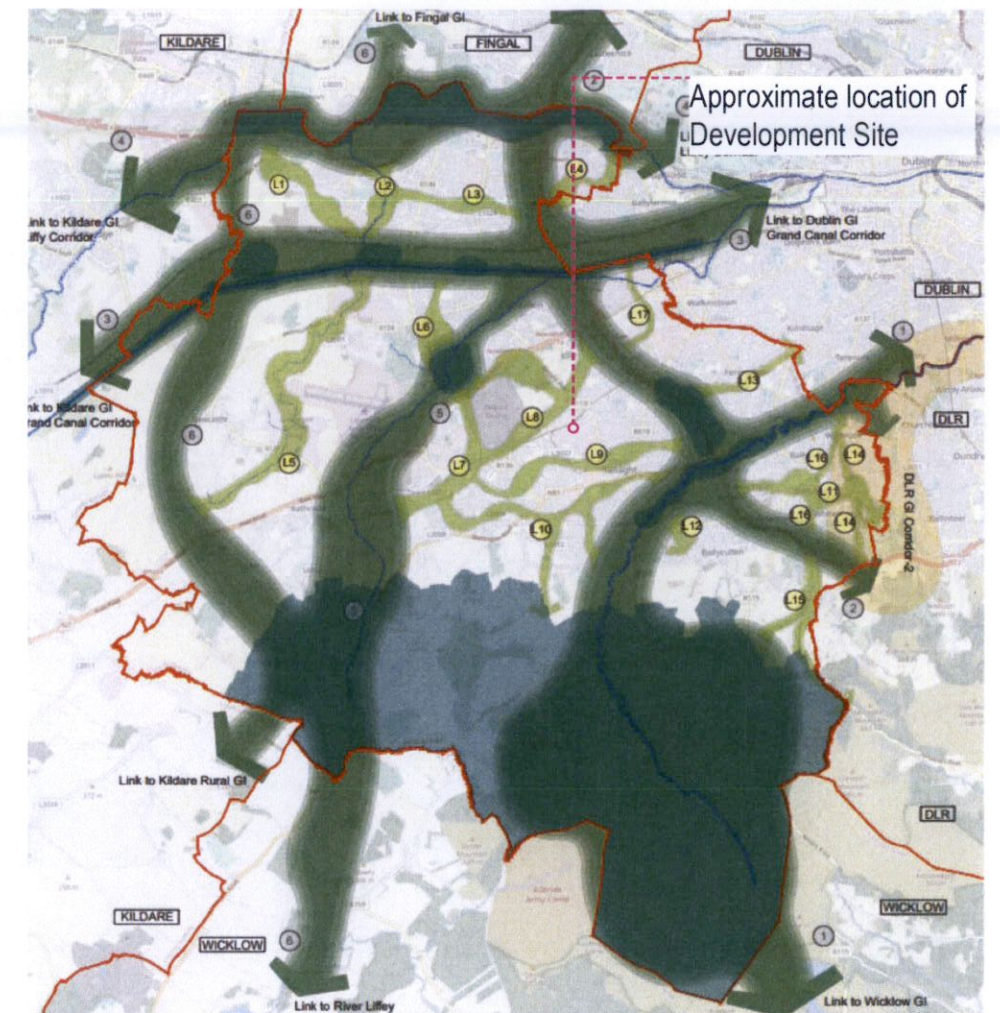


Figure 2.2: Green Infrastructure Strategy Map (South County Development Plan 2022-2028, Fig. 4.4)

# Green Infrastructure Proposed Local Network Plan



**Figure 2.3 - Local GI Network**  
**Note:** Diagram base - Figure 2.11 Open Space & Green Infrastructure (Tallaght LAP, 2020)

## 2.3 Green Factor Scoring

The existing 1st Avenue site is Zoned REGEN and as outlined above in Section 1.2 Existing Site Condition, offers very little in terms of green space. Reflective of its former commercial unit use, the site is primarily made up of hard standing surfaces, dominated by impermeable concrete and asphalt. What vegetation is existing is mainly located along the perimeter of the site, including a number of existing trees (mostly Poplar). The trees are generally in a poor condition - For further detail on the existing trees, please see accompanying Consulting Arborist's report and drawings.

To present a metric for the proposed Green Infrastructural interventions included within the scheme, a Green Factor Score (GSF) has been calculated for the TCF at First Avenue, utilising the SDCC Green Space Factor Tool.

Utilising the SDCC Parks Department Green Factor Calculator Scoring criterion for new trees, based on an area metric derived from canopy spread at installation (As directed by Oisín Egan, Executive Parks Superintendent, SDCC, Public Realm ), The TCF site scored a GSF Final GI Score of 0.23 Please see opposite:

In preparation of this Clarification Further Information, a process of engagement with the Public Realm Team in SDCC was undertaken, with a view to improving the GSF Score of Cookstown and exploring mitigation actions of a failing score.

The revised landscape scheme has proposed additional soft SuDS elements, including an increased number of storm water tree pits, swales and rain gardens to address storm water management at source. Combined with the measures, large areas of hard standing paving are proposed to be permeable. Please see the *Proposed SuDS Areas*, with Landscape Strategies Section - Page 1.

Green Space Factor Tool South Dublin County Council		Comhairle Contae Átha Cliath Theas South Dublin County Council	
User input indicated by Orange fields			
		User Input	
		Zoning lookup	Minimum GI Score
		REGEN	0.5
1. Enter Development Site Area m <sup>2</sup> <a href="#">HERE</a> ▶		7564	
Surface Type (see tab for detailed descriptions)	Factor	Proposed Surface Area m <sup>2</sup>	Factor Values
1. Short Lawn	0.3	0	0
2. Tall Lawn (wild, not mown)	0.5	1234	617
Permeable Paving	0.3	710	213
Vegetation		0	0
4a. Vegetation-Shrub below 3m	0.4	0	0
4b. Vegetation-Shrub / Hedgerow above 3m	0.5	60	30
4c. Vegetation-Pollinator friendly perennial planting	0.5	725	362.5
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	175	105
5b. Preserved trees	1.2	0	0
7. SuDS intervention (rain garden, bioswale)	0.6	24	14.4
Green Roof		0	0
9a. Green Roofs - Intensive green roof (substrate is 200-1200mm in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (substrate is 80-200mm in depth)	0.6	692	415.2
10. Green wall	0.4	16	6.4
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
<b>Total Equivalent Surface Area of Greening Factors</b>		<b>3,636.00</b>	
		<b>Green Factor Numerator</b>	<b>1763.50</b>
Minimum Required GI score		Final GI score	Result
0.5		0.23	Fail

With the proposed additional SuDS measures , the GSF for the Cookstown site has increased from 0.23 to 0.32 Please see opposite:

The presented score, though still failing on the required 0.5 for a REGEN Site, has been improved.

It is intended to present this improved score in combination with the inclusion of additional habitat creating interventions (suggested by the SDCC Public Realm Team) as mitigation.

The proposed mitigation measure include the proposing of Swift nesting boxes on the building facade, the provision of areas of free draining sand on the building's green roof, to provide habitat for ground nesting solitary bee species and to install Bat nesting boxes with the site's open space. Please see the *Biodiversity Enhancement Plan*, with Landscape Strategies Section - Page 16.



User input indicated by Orange fields

User Input	
Zoning lookup	Minimum GI Score
REGEN	0.5

1. Enter Development Site Area m <sup>2</sup> <a href="#">HERE</a> ▶		7564	
Surface Type (see tab for detailed descriptions)	Factor	Proposed Surface Area m <sup>2</sup>	Factor Values
1. Short Lawn	0.3	0	0
2. Tall Lawn (wild, not mown)	0.5	1236	618
Permeable Paving	0.3	1129	338.7
Vegetation		0	0
4a. Vegetation-Shrub below 3m	0.4	0	0
4b. Vegetation-Shrub / Hedgerow above 3m	0.5	60	30
4c. Vegetation-Pollinator friendly perennial planting	0.5	675	337.5
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	175	105
5b. Preserved trees	1.2	0	0
7. SuDS intervention (rain garden, bioswale)	0.6	861	516.6
Green Roof		0	0
9a. Green Roofs - Intensive green roof (substrate is 200-1200mm in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (substrate is 80-200mm in depth)	0.6	692	415.2
10. Green wall	0.4	40	16
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
<b>Total Equivalent Surface Area of Greening Factors</b>		<b>5,068.00</b>	

<b>Green Factor Numerator</b>	<b>2437.00</b>
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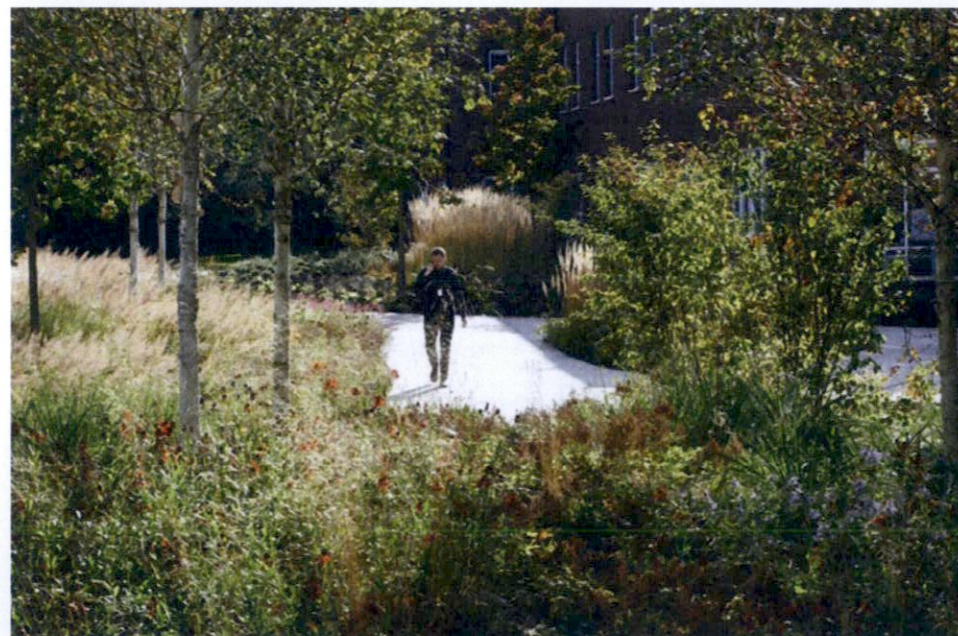
Minumum Required GI score	Final GI score	Result
0.5	0.32	Fail



Swale



Roof habitat: Free draining sand to provide nesting habitat for solitary bee species.



Rain Garden

### 3.0 Landscape Design Proposals & Rationale

#### 3.1. Site Planning

The proposed development lies within the Cookstown Industrial Estate, Tallaght. The Cookstown Estate is predominately low density, commercial development comprising industrial and commercial units lining an internal road network. It has vehicular links to the Belgard Road, which in turn links to the N81 (Tallaght By Pass), the N7 (Naas Road) and the M50 motorway. Tallaght Village and Tallaght Town Centre are a short drive away.

The Cookstown Estate is identified for development within the Tallaght Town Centre Local Area Plan (LAP), 2020-2026. With the primarily commercial uses within the estate being proposed to be replaced on an incremental basis through the development a of new, mixed use urban centre being the objective. The site planning on site has set out two main development blocks, a residential apartment block (subject to a separate application) and a Transitional Care Facility, both with internal, courtyard open spaces. The Transitional Care Facility is to be located to the north west of the site with frontage on to First Avenue, and the residential apartment block to be located to the east of the site, fronting on to Cookstown Road and First Avenue. Both development blocks are proposed to be on an approximate north south alignment. The apartment block is proposed to have active frontage at ground level fronting onto the Cookstown Road. The setting out of the proposed apartments and Transitional Care Facility blocks creates an internal street, which is to be a pedestrian friendly, traffic calmed environment and is to include on street parking and tree planting. The one-way internal street will have a junction with First Avenue in the north of the site and junction with Cookstown Road in the east. In the south west corner of the site is the development's public open space, a pocket park is proposed to be delivered as part of this development application and will in time form part of a larger, local park in this location as outlined in the LAP objectives for Cookstown.

#### 3.2 Public Open Space

The proposed development's Public Open Space will comprise a pocket park, planned for the south west corner of the development. The park is anticipated to form part of a larger, local neighbourhood park in this area as the incremental development of the surrounding Cookstown Estate progresses. The proposed pocket park to be delivered as part of this development will be some 1286 sqm in area and comprise a formal lawn area with a framing of tree planting. The lawn will also contain play elements in the form of balance beams and a totter trail on a safety surface of 'Safa' matting set in amongst tree planting. Within the lawn area and tree planting, stone boulders or erratics will be placed, offering another playful dimension to the space. The combined elements catering for a natural, unprescribed form of play. The open space will also feature a paved seating area with bespoke, hardwood bench seating, pollinator friendly planting mixes and specimen tree planting.

As a sustainable approach to the site development and referencing the site's present industrial nature, salvaged pieces of insitu concrete are proposed to be broken up and shaped to form playful stepping stones within the border of the formal lawn. Planting of meadow grasses and wildflower amongst the stepping stones being proposed to increase biodiversity within the park.

The proposed park will also feature an east west shared pedestrian and cyclist route some 3 metres wide. This route is anticipated to be continued through the larger neighbourhood park and form a link to the future neighbouring development blocks and streets to the west, as set out within the Tallaght Town Centre LAP. At the public opens space's western edge, at the development site's boundary, it is proposed to form a temporary fixed boundary comprising a paladin fence with hawthorn hedging and a tree line. This boundary will be eventually decamped, with the tree planting proposed to be transplanted for use elsewhere in the neighbourhood park.

Included in this document is an indicative sketch proposal for the wider neighbourhood park which demonstrates how the current development and it's Public Open Space can, in time form part of the wider neighbourhood, linking the proposed development and its open space through its circulation network to the adjoining future development blocks and streets, as set out in the LAP. Please see Figures 3.1 & 3.2.

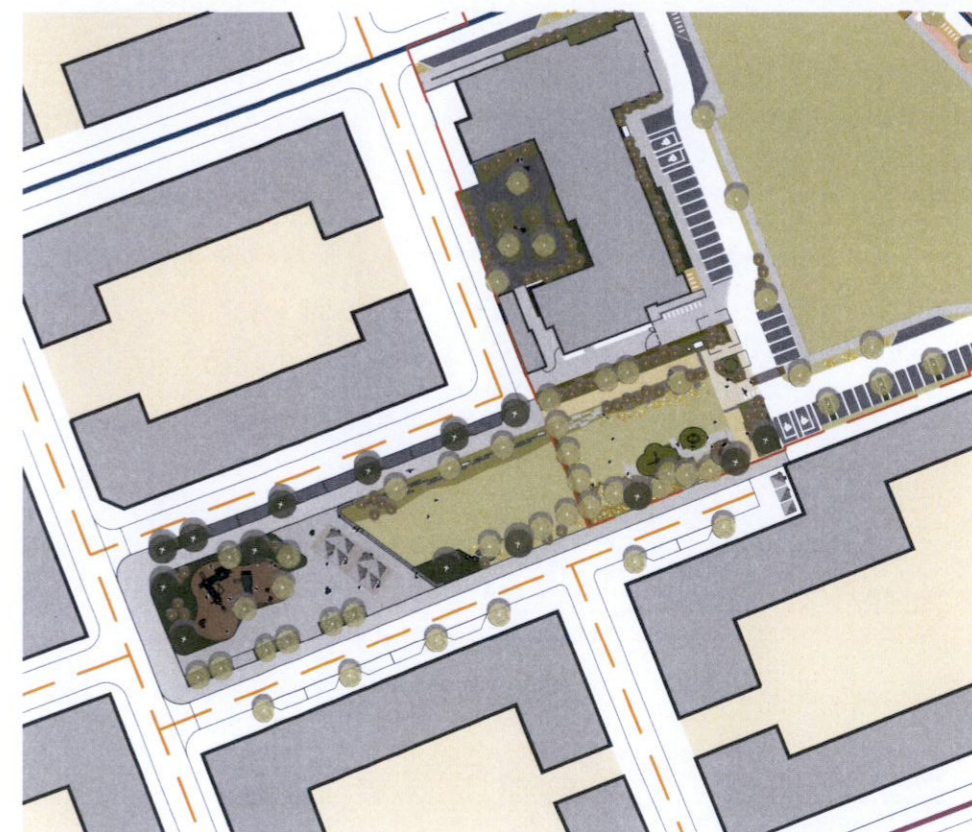
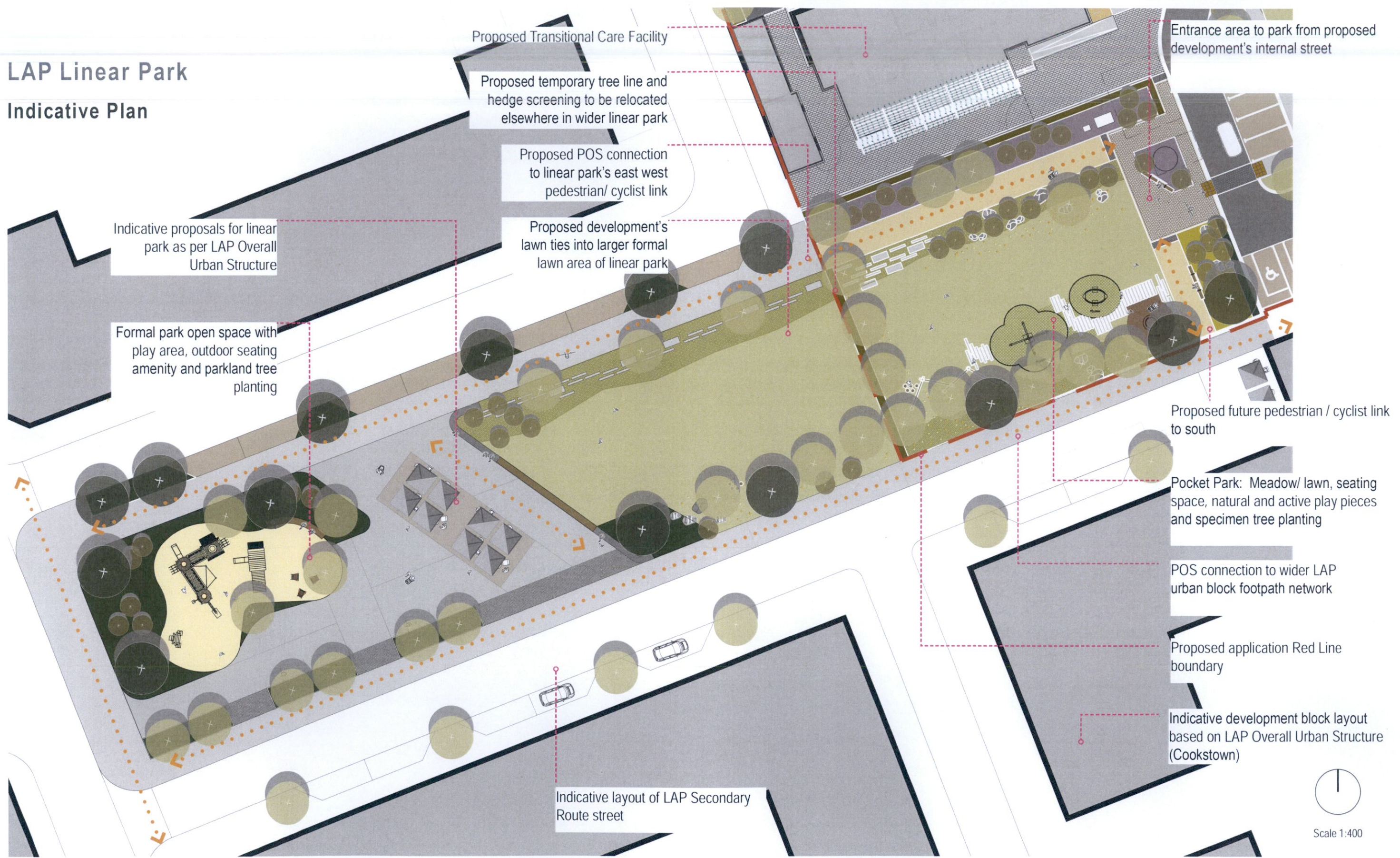


Fig. 3.1 Development Context: Local Area Plan, indicative blocks layout

- — — Application Site Boundary
  - — — Proposed LAP Tertiary Route
  - — — Existing / Improve LAP Primary Route
  - — — Existing / Improve LAP Secondary Route
- ↗ Circulation Routes (Fig 3.2)
- 1:2500

# LAP Linear Park

## Indicative Plan



Scale 1:400

Fig. 3.2 Local Area Plan - Indicative Pocket Park Sketch Plan

### 3.3 Cookstown Road & First Avenue

Currently the existing Cookstown Estate internal streets of First Avenue and Cookstown Road offer very little to the public realm. The proposed development will seek to create a suitable urban streetscape in line with objectives within the Tallaght Town Centre LAP. Ground floor units are proposed within the apartment block building with frontage on to Cookstown Road and First Avenue offering opportunity for external café seating. On street parking with street tree planting will also contribute to the creation of a comfortable and attractive urban streetscape.

### 3.4 Internal Street

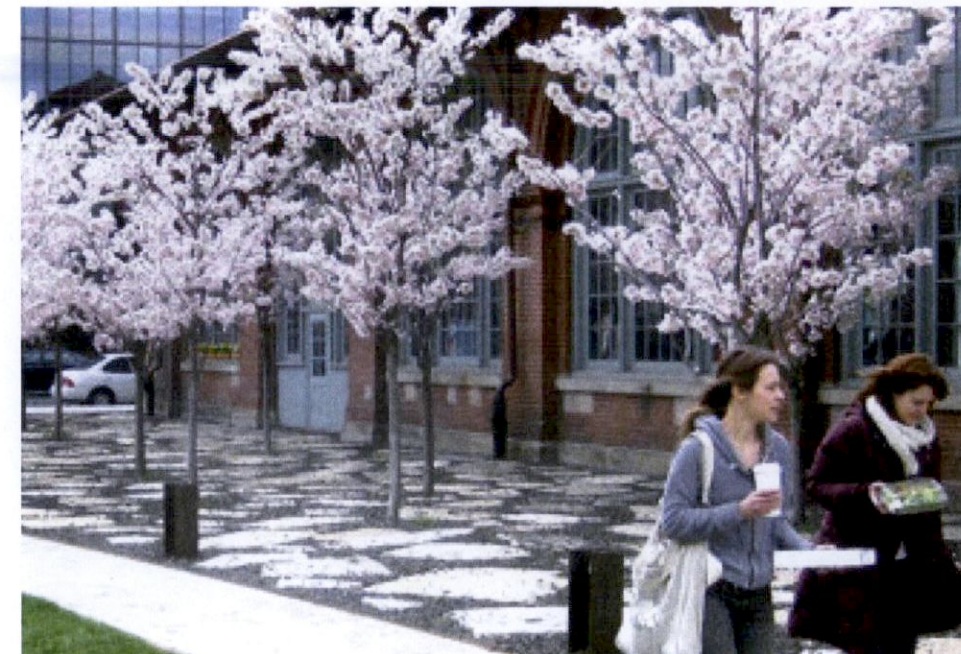
The development's internal street is proposed to lie between the residential and Transitional Care Facility development blocks. The street is proposed as a one-way system and as such is to be a pedestrian & cyclist friendly, traffic calmed environment. The street will have on street parking and be overlooked by the adjoining Assisted Living and future Apartment Residential units. Street trees are proposed amongst the parking bays, the street tree pits are to contribute to the development's SuDS approach with an infiltration type system designed to take run off from the carriageway into the pits.

### 3.5 Transitional Care Facility Courtyard Garden

The development's Transitional Care Facility block is designed with a primary, communal open space at its heart in the form of a courtyard garden. The garden will feature three island planters containing specimen & small flowering tree planting and a planting mix of herbaceous perennials and ornamental grasses providing a planting palette with seasonal colour and movement to be enjoyed by residents. The arrangement of the planters offers a circuitous walking route through the garden space for residents to enjoy the planting. The planting islands will also feature seating edges in the form of benches with arm and back rests for user comfort. The courtyard garden will also provide for break out space from the adjacent common room dining area with moveable outdoor furniture in place. Residential units fronting on to the courtyard garden will enjoy a level of privacy through a border of planting and vertical planting through wire trained climbers will provide further planting interest at the building façade.

The southern elevation of the Transitional Care Facility will overlook the development's public open space. To soften the view of this façade and make a stronger greening connection with the adjacent public park, an architectural pergola is proposed with vertical posts and steel cable cross cable for planting support. The structure will extend over the first-floor level of the Transitional Care Facility in this location and is proposed to have climbers trained on it.

Planting within the courtyard will also contribute to the developments SuDS strategy with rain garden/ swale planting designed to take run off from hard standing areas and down pipes.










Large format concrete feature steps with salvaged in-situ concrete from existing site

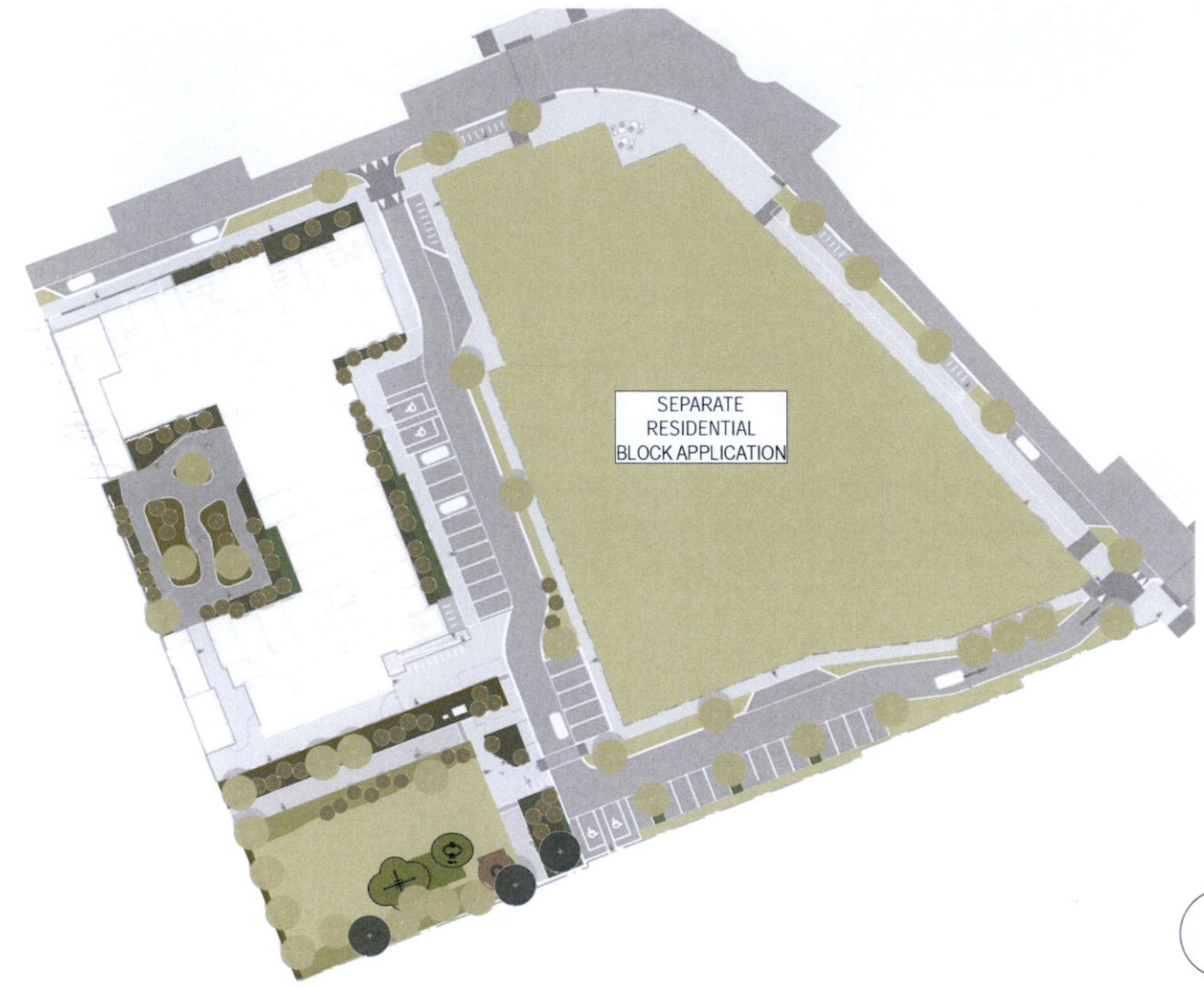
# Landscape Strategies

## First Avenue, Cookstown



### Primary Circulation & Spaces

-  Neighbourhood Pocket Park
-  Transitional Care Facility Communal Courtyard Garden
-  Internal Tree Lined Street
-  Primary Pedestrian Routes
-  Future Connections to Adjacent LAP Lands
-  Formal Seating
-  Play Area



### Proposed Tree Planting & Greening

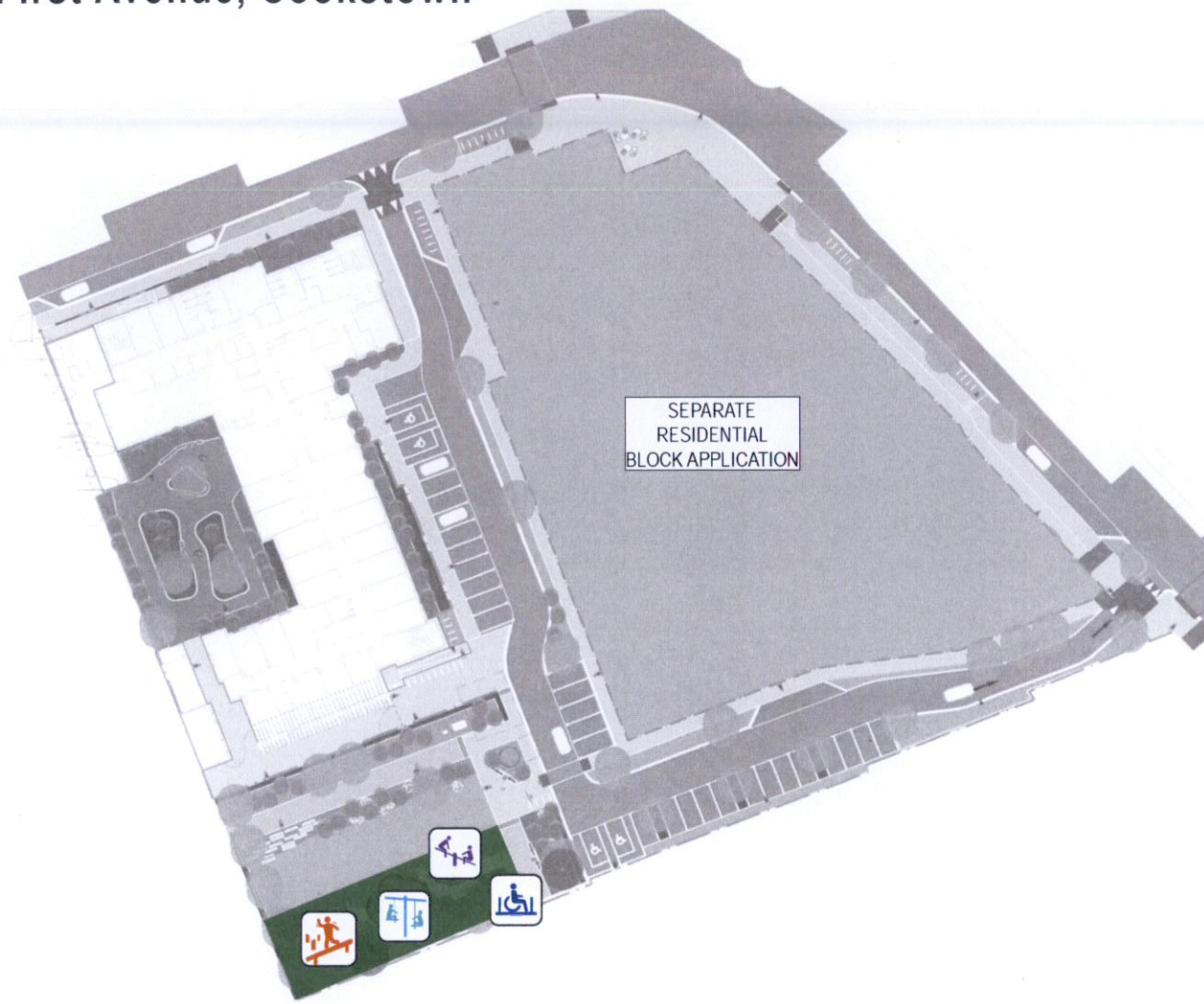
-  Proposed specimen and semi mature tree planting
-  Proposed small tree and specimen shrub planting
-  Proposed pergola structure with climber planting
-  Lawn/ Grass Seeded Area
-  Amenity & privacy buffer planting
-  Proposed steel wire trellis with climber planting



1:1000

# Landscape Strategies

## First Avenue, Cookstown



### Play Spaces Diagram

Public Play Area



Timber Balancing Beams and Stumps (5-14 yrs.) and Amenity Lawn Kickabout



Cross Scales Raised Seesaw (5-12 yrs.)



Circular Seesaw (3-12 yrs.)



Small Wheelchair Carousel (5-12 yrs.)



Timber Balancing Beams and Stumps



Cross Scales Raised Seesaw

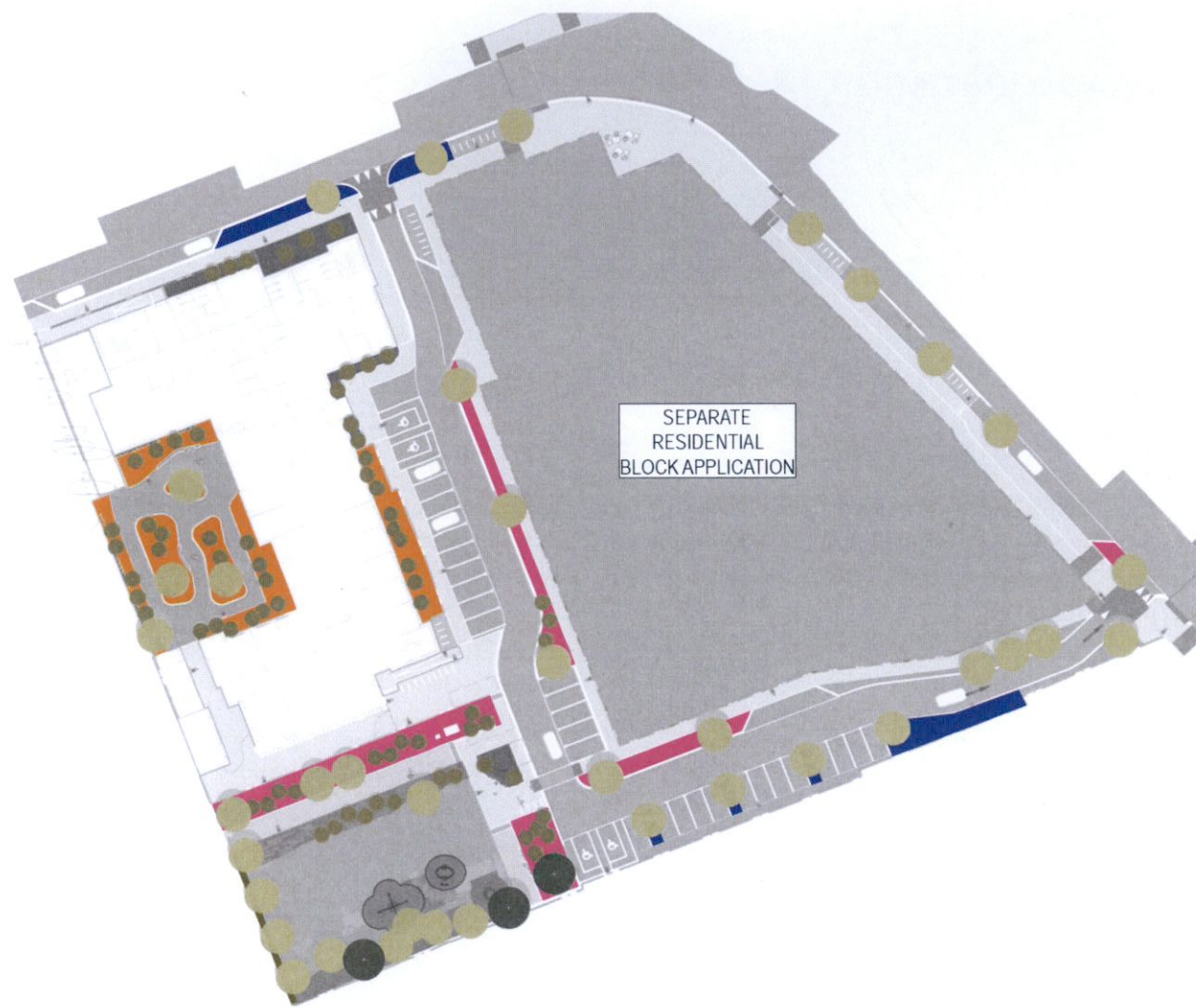


Circular Seesaw



Small Wheelchair Carousel

The proposed development will deliver a Public Open Space, which represents a section of the Tallaght Town Centre LAP objective neighbourhood pocket park. The public open space will comprise a amenity lawn area - with meadow, lawn, bulb planting and placed boulders creating and engaging and playful space for all ages. Along its southern edge, adjacent a proposed stand of trees with under storey bulb planting, will be a proposed play trail with balance beams and in log stumps presenting opportunity for adventure play. Combined with formal play piece including a see saw and swings, with a universally accessible carousel.



**Proposed Soft SuDS Areas**

- Storm Water Tree Pits
- Rain Gardens
- Swales



Swale



Swale



Rain Garden



Storm Water Tree Pit

Landscape proposals for Cookstown will seek to maximise soft SuDS opportunities for the management of storm-water on site. Interventions include a sedum green roof on the TCF's roof and rain gardens' within the private courtyard. In the public realm, road side verges will function as swales and storm water tree pit. Within the public open space too, swales with appropriate planting will collect surface water, while also providing for pollinators.

## Landscape Strategies First Avenue, Cookstown



NHBS Habitat  
Double Chambered  
Rocket Bat Boxes  
or equivalent





Facade mounted swift nest  
box or equivalent.



Green Roof habitat creation - Free draining sand to provide nesting  
habitat for solitary bee species.

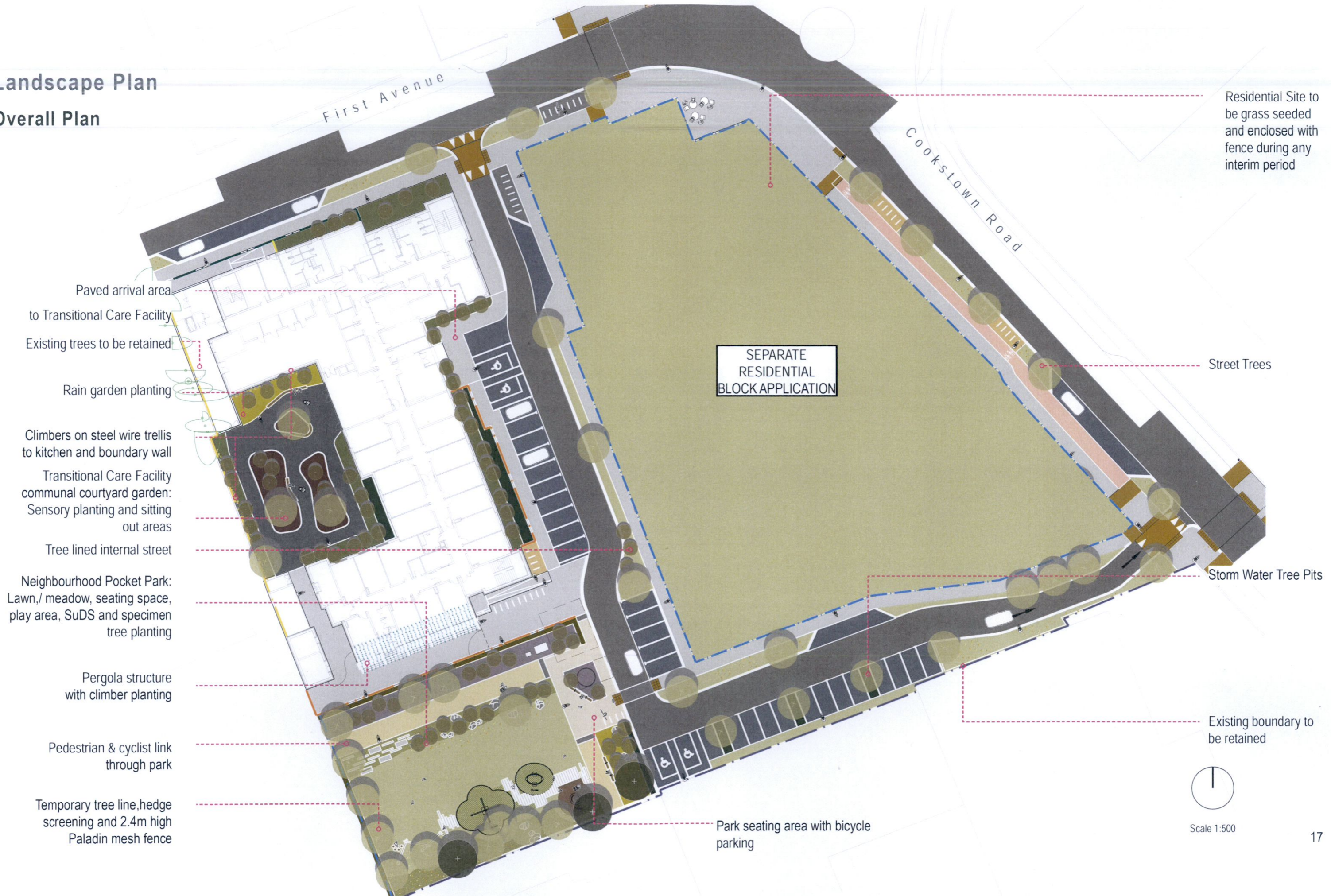
### Biodiversity Enhancement Plan

-  Indicative Proposed Pole/ tree Mounted Bat Box Locations
-  Indicative Proposed Facade mounted Swift Box Locations

Landscape proposals for Cookstown will provide a range of planting; from meadow/ tall lawn areas with seasonal bulb planting, which will provide early spring forage for pollinators to a selection of pollinator friendly planting comprising native and non native grasses. Perennials, shrubs/ climbers and trees. The layering of planting and planting typologies will provide a range of habitats - including hedge, micro woodland and swale & rain garden planting. The proposed planting proposals will also be supplemented through the provision of Swift nesting boxes on the building facade and the creation of habitat for ground nesting solitary bee species through the installation of areas for free draining sand on the TCF's roof. Within the public open space and in line with recommendations for the project's consulting ecologists (Enviroguide), bats boxes will be installed.



**Landscape Plan**  
**Overall Plan**



Residential Site to be grass seeded and enclosed with fence during any interim period

SEPARATE RESIDENTIAL BLOCK APPLICATION

Street Trees

Storm Water Tree Pits

Existing boundary to be retained



Scale 1:500

Park seating area with bicycle parking

Paved arrival area to Transitional Care Facility

Existing trees to be retained

Rain garden planting

Climbers on steel wire trellis to kitchen and boundary wall

Transitional Care Facility communal courtyard garden: Sensory planting and sitting out areas

Tree lined internal street




Neighbourhood Pocket Park: Lawn, / meadow, seating space, play area, SuDS and specimen tree planting

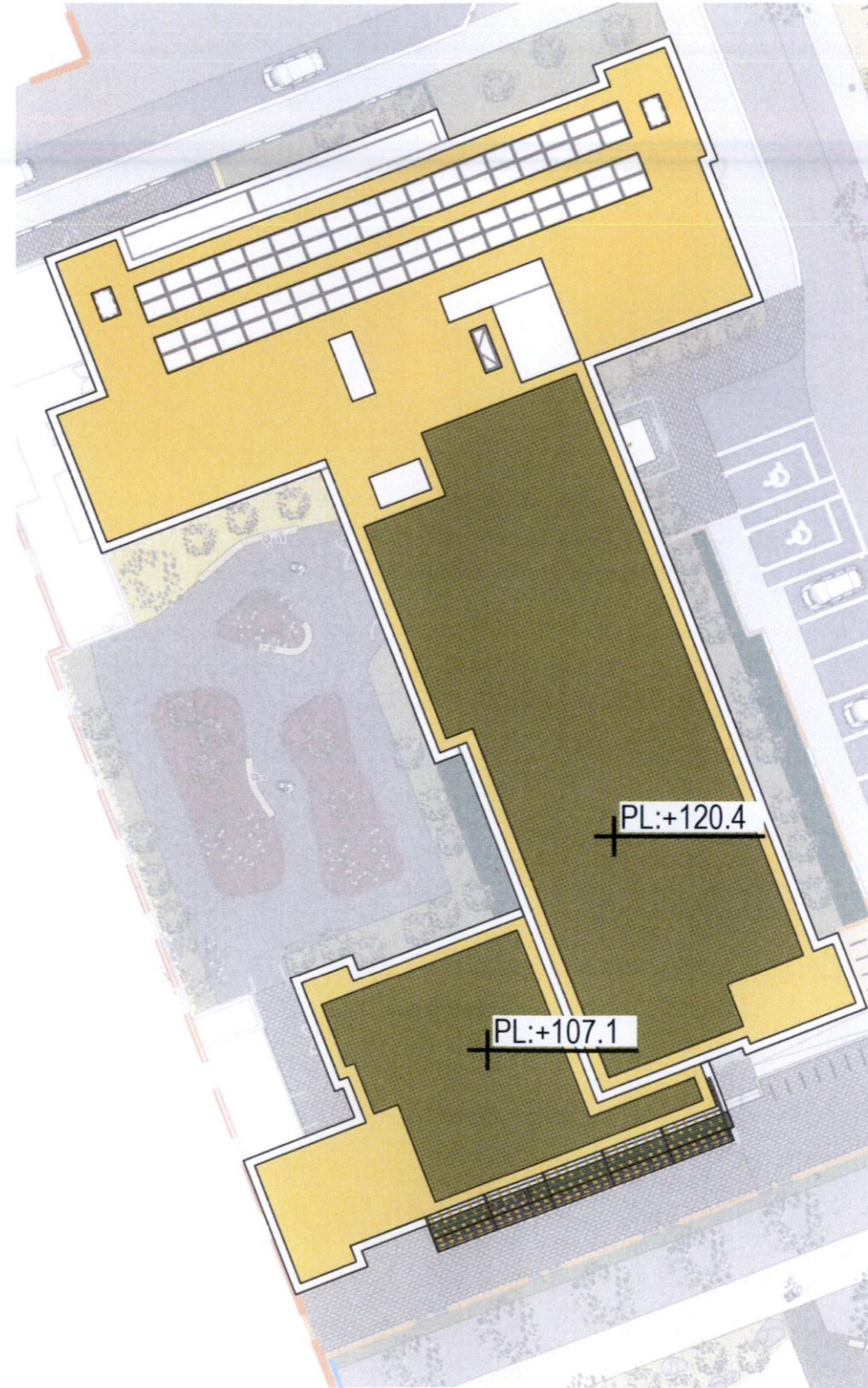
Pergola structure with climber planting

Pedestrian & cyclist link through park

Temporary tree line, hedge screening and 2.4m high Paladin mesh fence

# Green Roof Plan

-  Sedum green roof
-  Gravel - mixed rounded quartzite and granite 20-40mm  
Undisturbed areas of ballast roof to be surfaced with free draining sand to provide nesting habitat for solitary bee species.
-  Pergola structure with climber planting



Scale 1:400

4.0 Hard Landscape Materials & Furniture



Residential courtyard with exposed aggr concrete surface and tree planting



Core building entrance paving - Silver granite PCC pavours



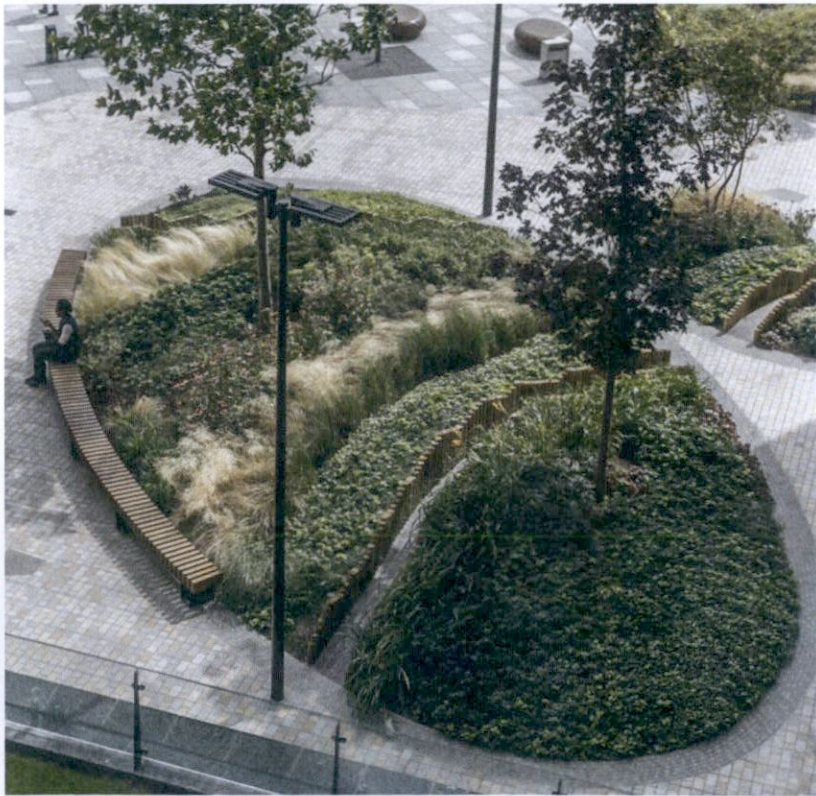
Stainless steel bicycle stands on firm gravel



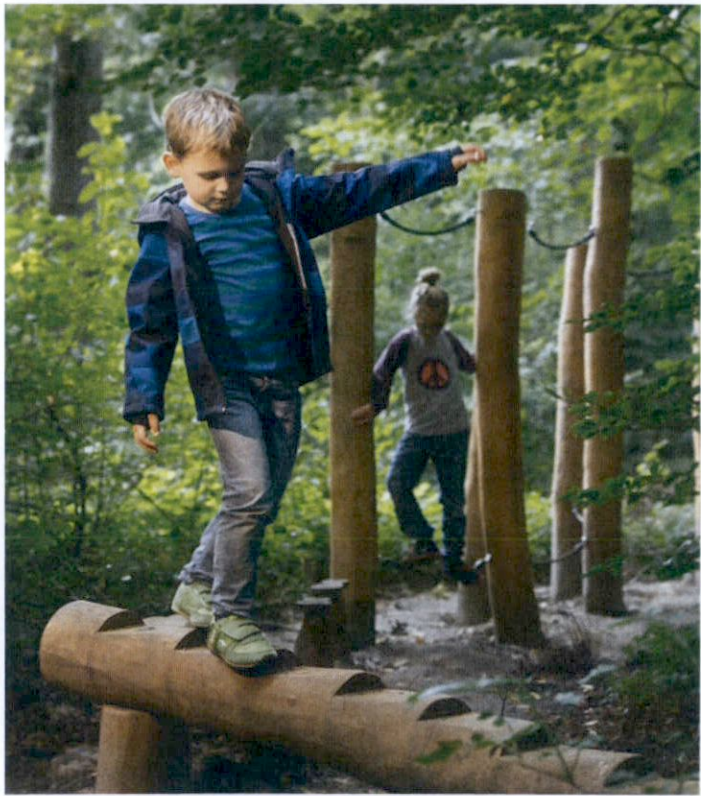
Robust, solid oak bench seating on firm gravel



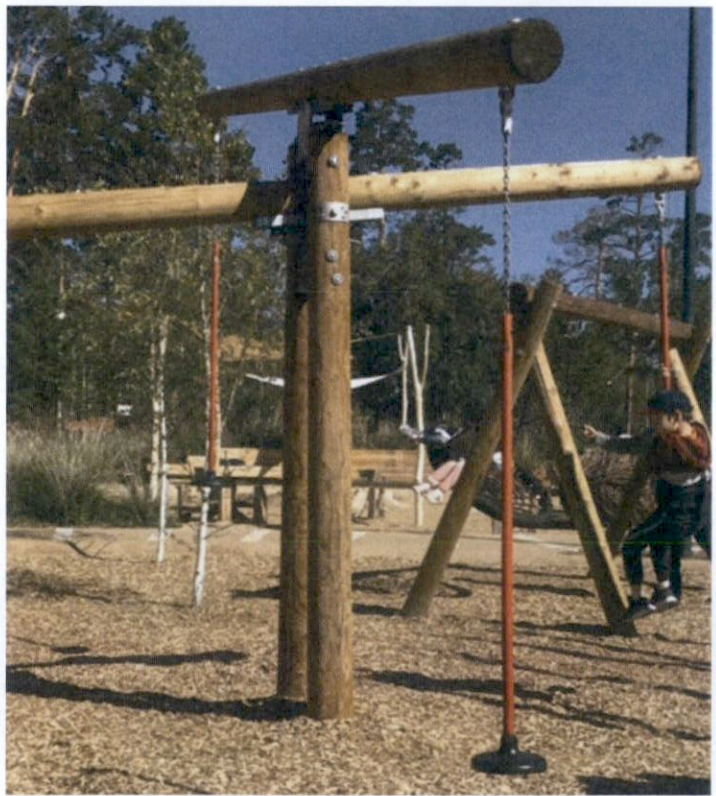
Steel frame bistro style table & chairs sets



'Island' planter with timber edge seating in courtyard



Nature play trail



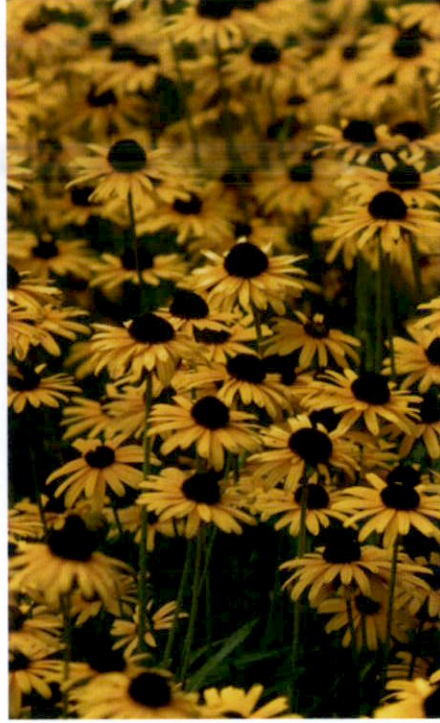
Cross Scales Raised Seesaw

## 5.0 Soft Landscape Materials

### Herbaceous & Grasses Mix A



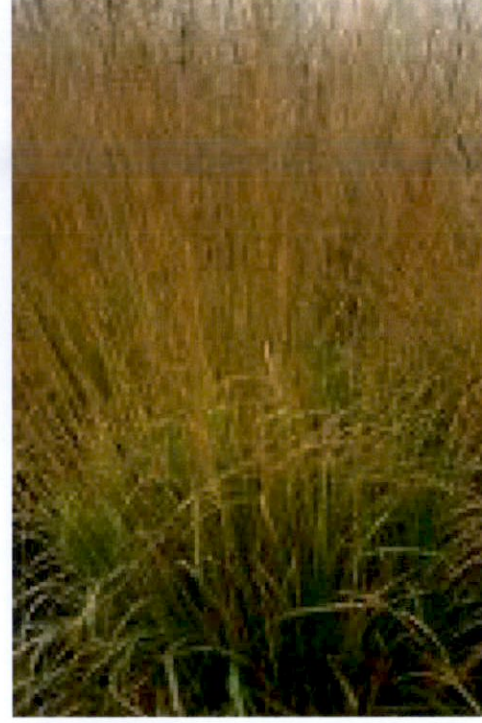
*Calamagrostis x acutiflora* 'Karl Foerster'



*Rubeckia fulgida* 'Goldstrum'



*Verbena bonariensis*



*Molinia caerulea* subsp. *Arundinacea*



*Allium* 'Purple Sensation' with grasses and *Salvia nemerosa*

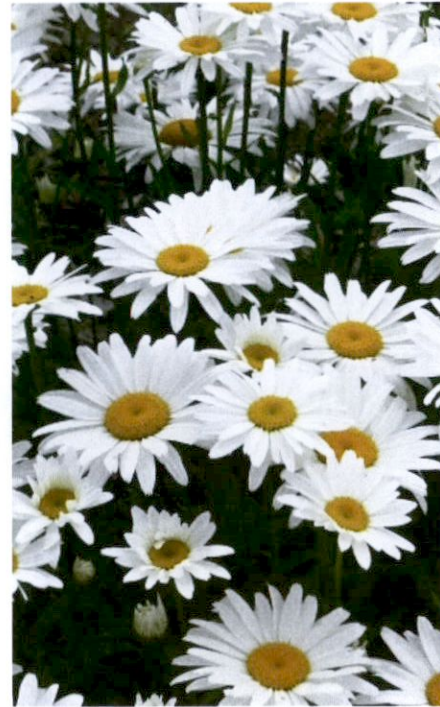


*Salvia nemerosa* c. vars

### Herbaceous & Grasses Mix B



*Luzula sylvatica*



*Leucanthemum x superbum* 'Snow Lady'



*Digitalis purpurea* 'Alba'



*Carex morrowii* 'Ice Dance'



*Agapanthus africanus* 'Albus'



*Verbena hastata* 'Alba'

Shade Tolerant Mix



*Astilbe chinensis*



*Brunnera macrophylla*



*Rodgersia pinnata*



*Athyrium filix-femina*



*Sarcococca hookeriana*

Sensory Mix



*Salvia argentea*



*Rosmarinus officinalis c. vars*



*Artemisia absinthium*



*Helichrysum-italicum*

Climbers



Climbers trained on stainless steel trellis



Climbers trained on stainless steel trellis

Proposed Small Flowering Trees



*Amelanchier lamarckii*: White flower April & May with great autumn colour Multi stem small flowering tree



*Magnolia 'Kobus'*: Large white flowers born on bare stems in spring, small flowering tree.



*Prunus serrulata c vars.*: Spring flowers born on bare stems textured bark for winter interest.



*Malus 'Winter Gold'*: Its clusters of reddish pink buds open to white flowers in mid spring followed by bright yellow fruit in autumn

Proposed Semi-Mature Trees



*Gleditsia triacanthos* - Honey Locust

Leaves bipinnate, with small, leaflets, golden-yellow in early summer, becoming greener in summer

*Betula pendula* - Silver Birch

Native species with small leaf and interesting bark

*Tilia cordata* 'Greenspire' - Lime

Glossy dark green, heart-shaped leaves to 8cm in length, turning yellow in autumn

Installation: 4.5-5.0m height, 1.5-2.0m spread

*Prunus avium* - Sweet Cherry

Bowl-shaped white flowers in April and May. Autumn leaves turn fiery red and orange. Shining red-dish-brown bark and a broadly conical shape

*Quercus robur* - Oak

Broad and spreading crown with sturdy branches beneath and Autumn fruit

## 6.0 Proposed Planting Schedule

### Semi Mature & Extra Heavy Standard Tree Planting

Birch	<i>Betula costata</i> , 2 x tr. / wrb / 30-35cmg.
Honey Locust	<i>Gleditsia triacanthos</i> , 2 x tr. / wrb / 30-35cmg.
Swamp Oak	<i>Quercus palustris</i> , 2 x tr. / wrb / 30-35cmg.
Oak	<i>Quercus robur</i> , 2 x tr. / wrb / 30-35cmg.
Scots Pine	<i>Pinus sylvestris</i> , 2 x tr. / wrb / 30-35cmg.
Maple	<i>Acer campestre</i> , 2 x tr. / wrb / 18-20cmg.
Turkish Hazel	<i>Corylus colurna</i> , 2 x tr. / wrb / 18-20cmg.
Birch	<i>Betula pendula</i> , 2 x tr. / wrb / 18-20cmg.
Honey Locust	<i>Gleditsia triacanthos</i> , 2 x tr. / wrb / 20-25cmg.
Sweet Cherry	<i>Prunus avium</i> , 2 x tr. / wrb / 18-20cmg.
Oak	<i>Quercus robur</i> , 2 x tr. / wrb / 18-20cmg.
Lime	<i>Tilia cordata</i> 'Greenspire', 2 x tr. / wrb / 16-18cmg.

### Small Flowering Trees

<i>Amelanchier lamarkii</i> , multi stem min 5 breaks, 2 x tr, wrb, 2.0-2.5m h., 1.5m s.
<i>Craetagus mongyna</i> multi stem, min. 5 breaks, 2 x tr., wrb, 2.0-2.5m h., 1.5m s.
<i>Magnolia 'Kobus'</i> , multi stem min 5 breaks, 2 x tr, wrb, 2.0-2.5m h, 1.5m s.
<i>Malus 'Winter Gold'</i> multi stem, min. 5 breaks, 2 x tr., wrb, 2.0-2.5m h., 1.5m s.
<i>Prunus serrulata c vars</i> , multi stem, min. 5 breaks, 2 x tr., wrb, 2.0-2.5m h., 1.5m s.

### Clipped Evergreen Hedging

<i>Ilex crenata</i>
<i>Ilex 'Blue Princess'</i>
<i>Prunus lusitanica</i>
<i>Buxus sempervirens</i>
5 ltr.cg. planted at 500mm centres

### Ornamental Grass and Herbaceous Mix A

All 2-3 ltr.cg. planted at 300-500mm centres:

<i>Allium 'Christophii'</i>
<i>Anemanthele lessoniana c. vars</i>
<i>Calamagrostis x acutiflora 'Karl foerster'</i>
<i>Chionochloa flavicans</i>
<i>Echinops ritro c. vars</i>
<i>Eryngium maritimum</i>
<i>Knautia macedonica</i>
<i>Libertia grandiflora</i>
<i>Molinia caerulea subsp. Arundinacea</i>
<i>Rubeckia fulgida 'Goldstrum'</i>
<i>Salvia nemerosa c. vars</i>
<i>Schizostylus coccinea c. vars</i>
<i>Sedum spectabile 'Autum Joy'</i>
<i>Tulbaghia violacea</i>
<i>Verbena bonariensis</i>

5 Ltr. Shrubs
<i>Hydrangea paniculata</i>
<i>Lavandula angustifolia</i>

### Ornamental Grass and Herbaceous Mix B

All 2-3 ltr.cg. planted at 300-500mm centres:

<i>Digitalis purpurea 'Alba'</i>
<i>Verbena hastata 'Alba'</i>
<i>Allium hollandicum</i>
<i>Agapanthus africanus 'Albus'</i>
<i>Luzula sylvatica</i>
<i>Campanula carpatica 'White Clips'</i>
<i>Leucanthemum x superbum 'Snow Lady'</i>
<i>Viola sororia 'Freckles'</i>
<i>Carex morrowii 'Ice Dance'</i>
<i>Miscanthus sinensis 'Morning Light'</i>

### Sensory Planting Mix

<i>Artemesia absinthium</i>
<i>Helichrysum-italicum</i>
<i>Lavandula angustifolia cvs.</i>
<i>Rosmarinus officinalis cvs.</i>
<i>Salvia argentea</i>
<i>Thulbaghia violacea</i>
All 2-5 ltr.cg. planted at 400-500mm centres.

### Shade Tolerant Mix

All 2ltr. cg, planted in drifts of 5-7 plants at 7 per sq

<i>Rodgersia pinnata</i>
<i>Rodgersia podophylla</i>
<i>Rodgersia pinnata 'Fireworks'</i>
<i>Asplenium scolopendrium</i>
<i>Polystichum setiferum</i>
<i>Athyrium filix-femina</i>
<i>Sarcococca hookeriana</i>
<i>Brunnera macrophylla</i>
<i>Pulmonaria officinalis</i>
<i>Alchemilla mollis</i>
<i>Astilbe chinensis</i>

### Climbers:

2.0-2.5m height at installation at 500mm centres across width of trellis & pergola support.

<i>Clematis armandii</i>
<i>Parthenocissus tricuspidata</i>
<i>Wisteria sinensis</i>



### Rain Garden Mix

Shrubs species:

Oregon Grape	<i>Mahonia eurybracteata</i> 'Soft Caress'
Sweet Box	<i>Sarcococca confusa</i>
Skimmia	<i>Skimmia japonica</i> 'Rubella'

Perennials species (listed on All-Ireland Pollinator Plan 2015-2020):

*Achillea filipendulina*  
*Amsonia tabernaemontana* var *salicifolia*  
*Anemone x hybrida* 'Honorine Jobert'  
*Calamintha* 'Blue Cloud'  
*Polemonium caeruleum*  
*Rudbeckia fulgida*  
*Verbena bonariensis* 'Lollipop'  
*Veronicastrum virginicum* 'Album'  
*Libertia formosa*  
*Libertia grandiflora*  
*Luzula nivea*  
*Luzula sylvatica*

Ornamental grasses:

*Carex elata* (native plant)  
*Deschampsia cespitosa*  
*Helictotrichon sempervirens*  
*Molinia caerulea* (native plant)

### Hedging

Native Hedging

All bare roots whips or feathered 900-1200 high. Planted in a double staggered row at 600mm centres.

*Craetagus mongyna*  
*Ilex aquifolium*  
*Prunus spinosa*

### Meadow

Suitable for occasional cutting (every 6 weeks approx. from March – October).

Suitable for roadside verges as sightlines for traffic safety can be maintained.

Leave sward uncut during month of May. Verges can be seeded with a wildflower / grass mix of native species. Remove arising with each cut. Ratio of Wildflower to Grass Seed; 70:30. Sowing rate 2gr / m2 approx.

Wildflowers:

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

Native Grasses:

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

Bulb Mix (5 bulb types combined in equal proportions, planted 25 bulbs / m2

)

20% *Allium* species, 20% *Crocus*, 20% *Galanthus*, 20% *Narcissus*, 20%

*Scilla*

Bulb coverage: 25% of total area

### Bulb Planting

Planted as bulbs, topsize, sown in drifts of 18-20 bulbs per sqm.

<i>Anemone blanda</i>	Wood Anemone
<i>Narcissus c. vars</i> (3 approx.)	Daffodil
<i>Galanthus c vars</i>	Snowdrops
<i>Tulipa</i> 'white triumphator'	Tulips
<i>Camassia c. vars</i> (3 approx.)	Camas
<i>Crocus c. vars</i>	Crocus
<i>Hyacinthoides non-scripta</i>	Bluebells

Abbreviations:

xtr.	number of transplants in nursery
h.	height
s.	spread
wrb	wire root-balled
cmg	girth of tree in centimeters measured 1m above ground
cvs.	cultivated varieties
2ltr cg	plants supplied in 2 litre volume containers

## 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 healthy 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 mix are:

### Perennials

*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

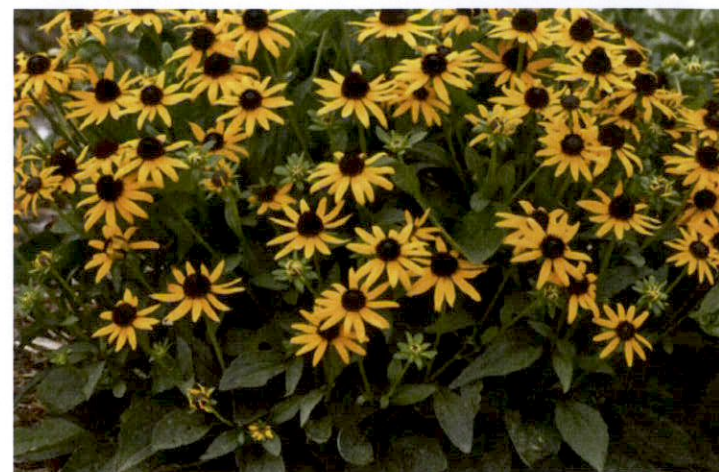
*Malus sylvestris*  
*Prunus avium*  
*Pyrus calleryana*



*Euphorbia amygdaloides*



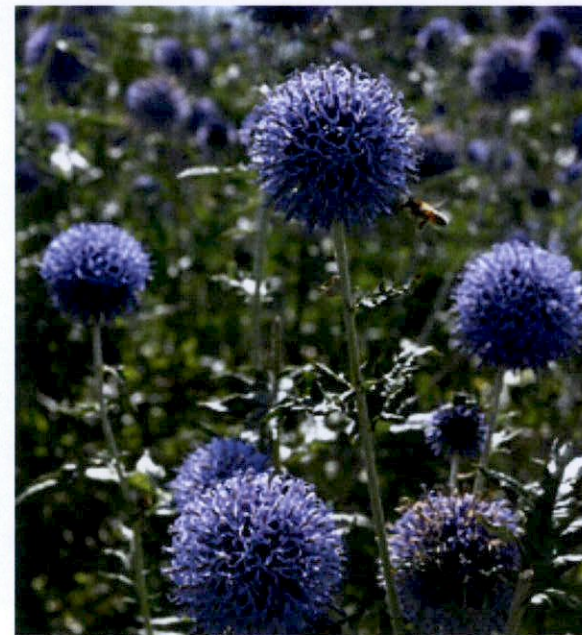
*Knautia macedonica*



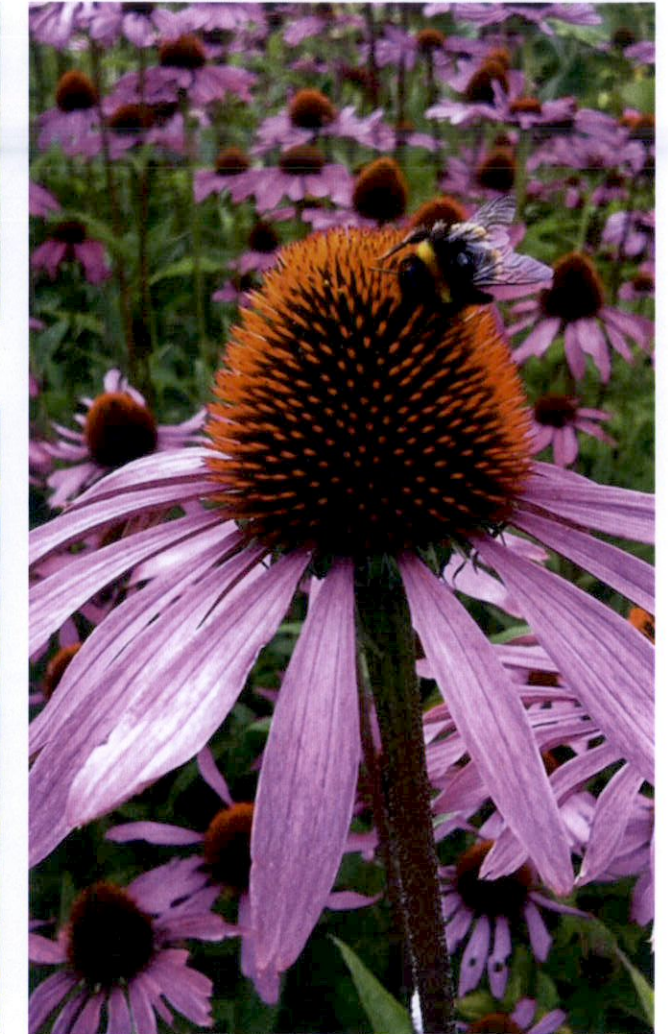
*Rudbeckia fulgida*



*Crocus* var.



*Echinops* var.



*Echinacea purpurea*



*Nepeta faassenii*



*Campanula rapido*



*Hydrangea paniculata*



*Salvia* var.



*Allium schoenoprasum*



*Helleborus foetidus*



*Aster* var.



*Lavandula angustifolia*



*Sedum telephium*



*Hebe* var.

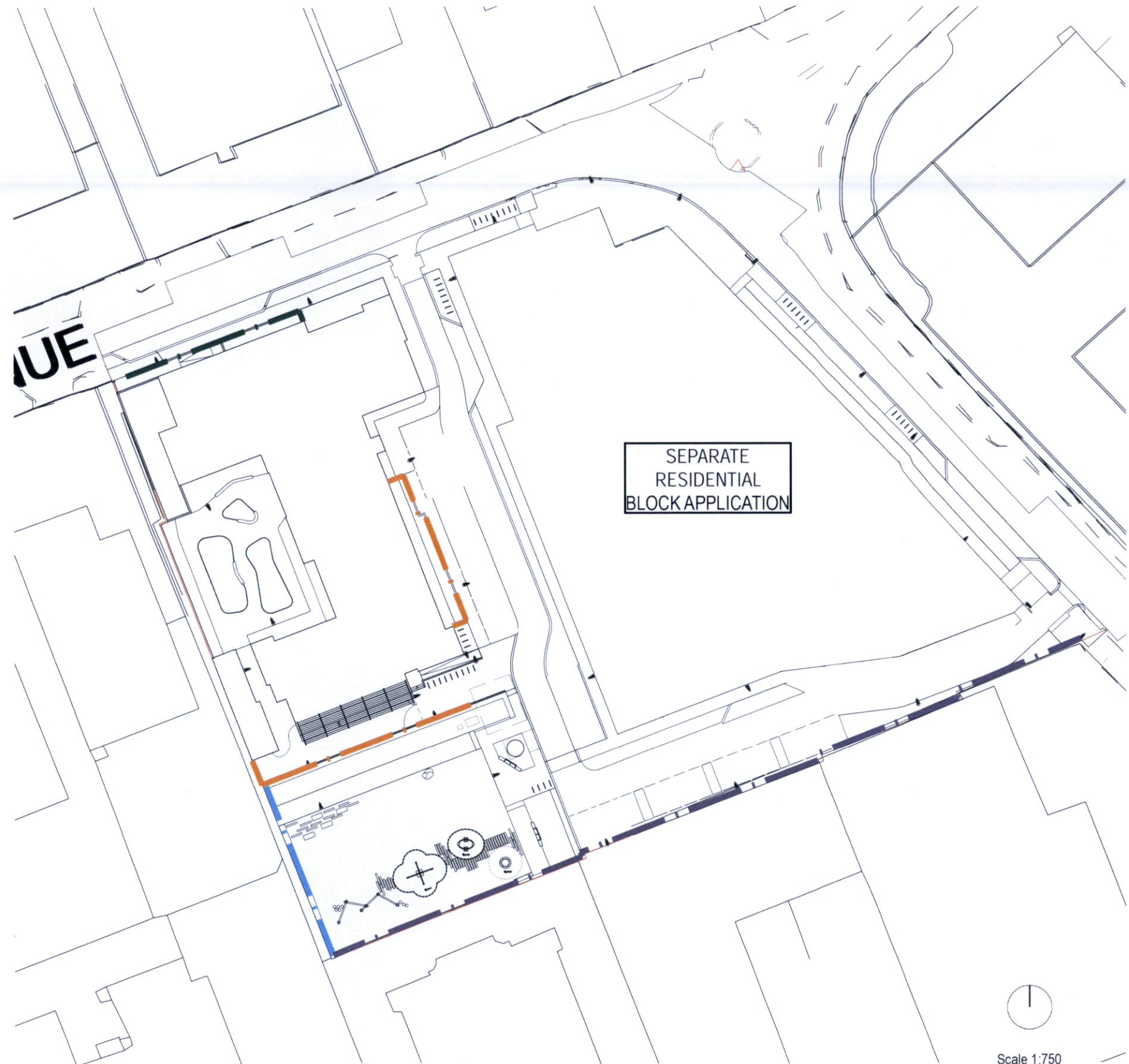


*Cirsium rivulare* 'Atropurpureum'

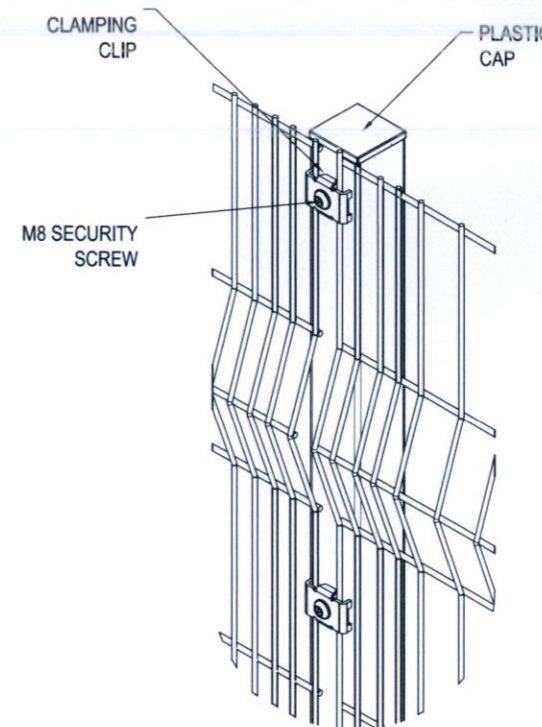
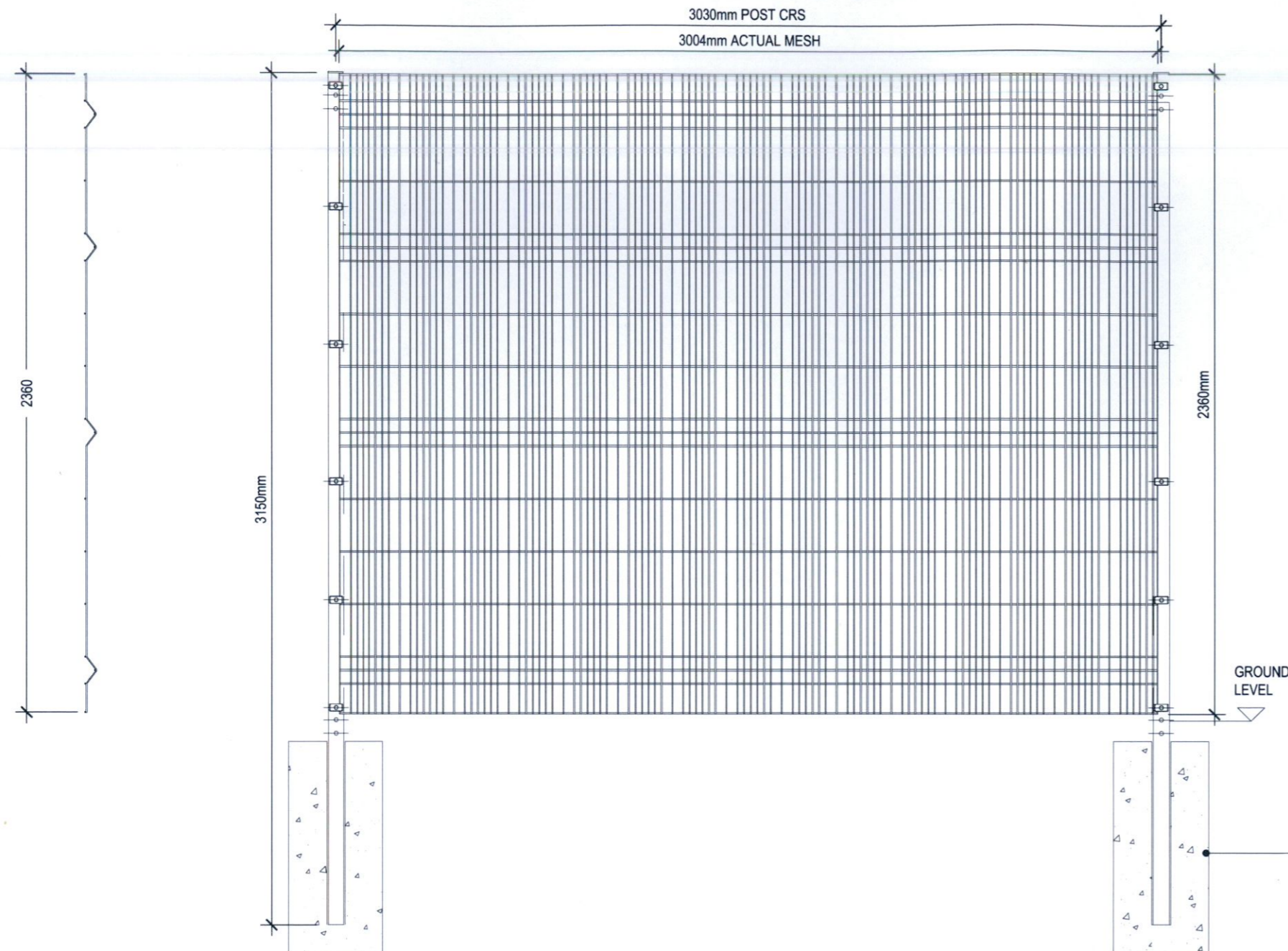
## 7.0 Boundary Treatments

### Boundaries

-  2.4m high Paladin striped mesh fencing. To be screened with tree and hedge planting.
-  Proposed low level wall and galvanised and painted mild steel railing.  
See Consulting Architect's Elevation drawings.
-  Low level brick wall.  
See Consulting Architect's Elevation drawings.
-  Existing boundary to be retained.



Scale 1:750



**Notes:**

Product Code: A02-24

Post Size: 60x60mm

Height: 2360mm

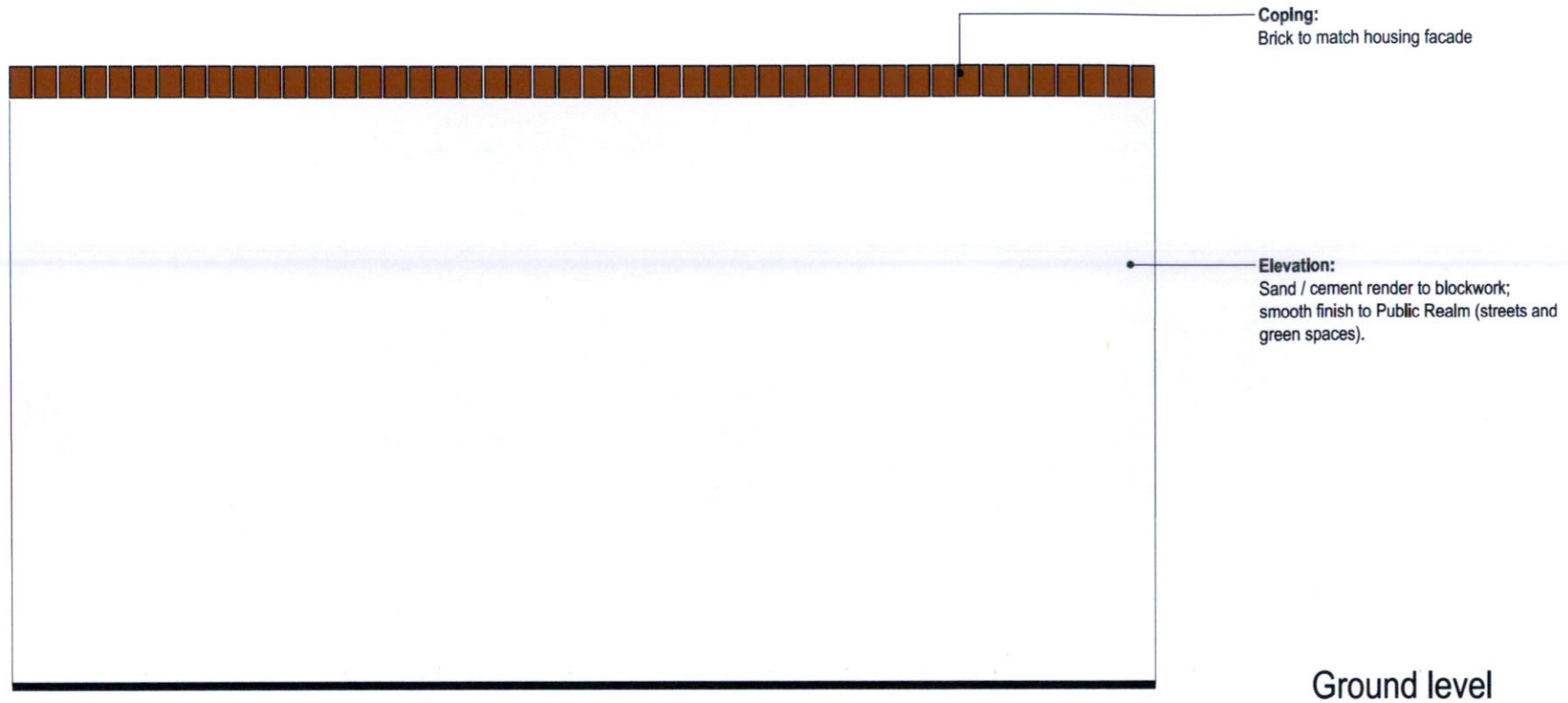
Post Centres: 3030mm

Horizontal Wires (QTY): 20

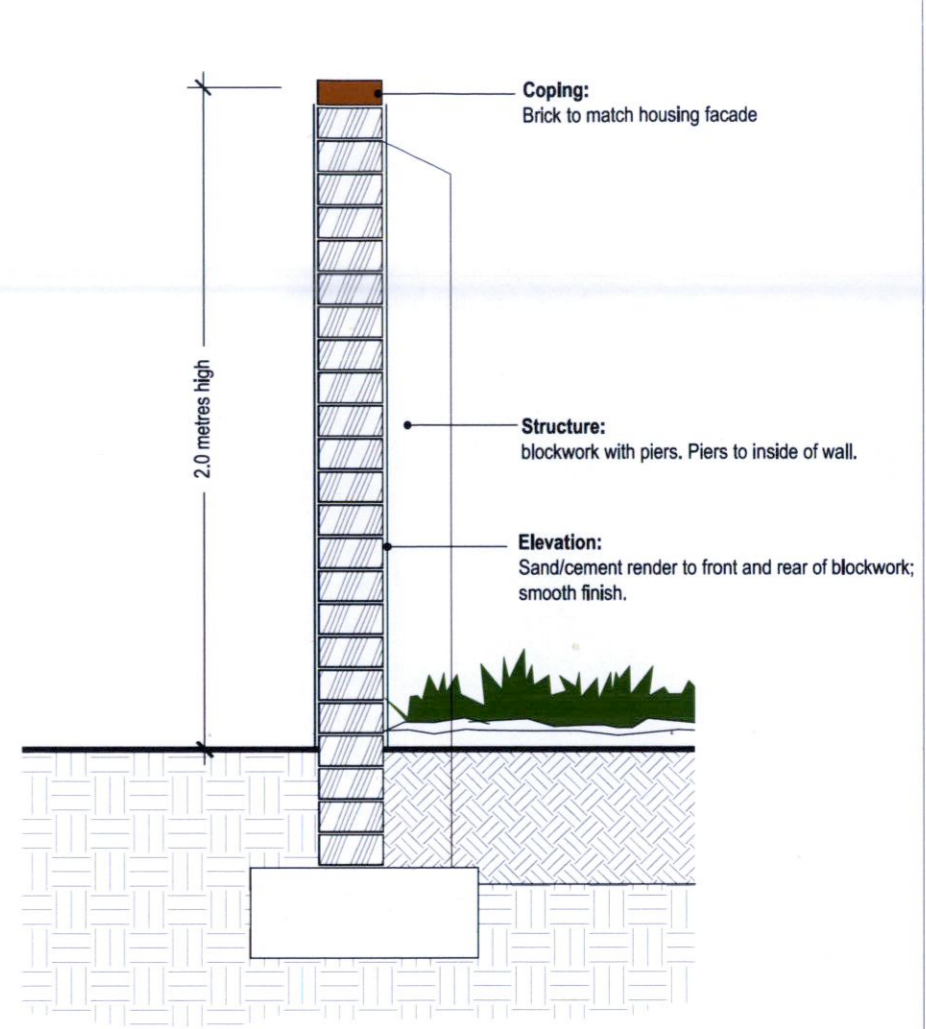
Vertical Wires: Ø4mm

Horizontal Wires: Ø5mm

Aperture:  
24mm x 195mm - min  
40mm x 195mm - max

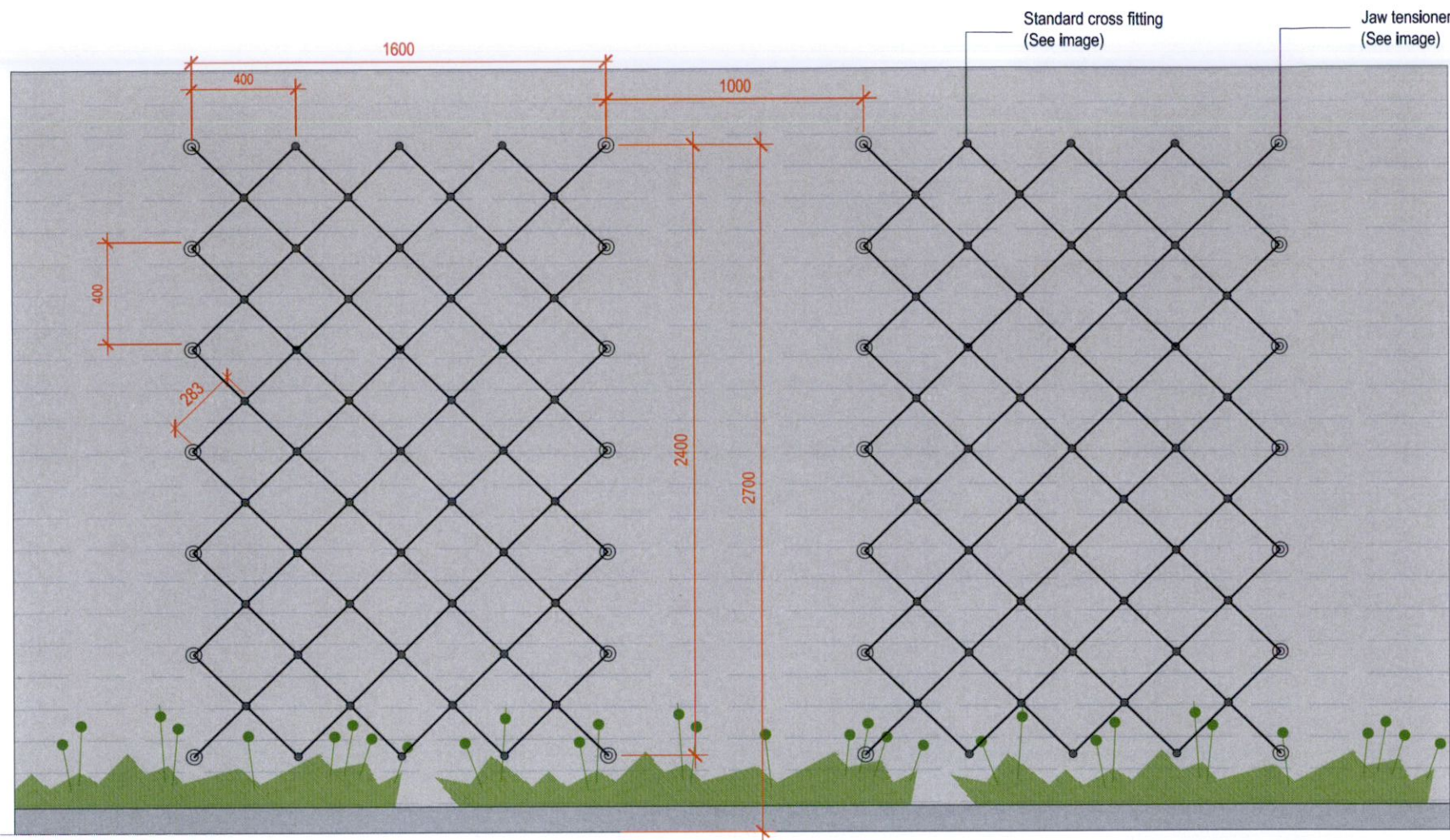


ELEVATION



SECTION

## 8. Soft Landscape Details



Wire Trellis Front Elevation  
Scale 1:25



Jaw tensioner attached to pro-eye fitting



Pro Cross Fitting - SG2.5

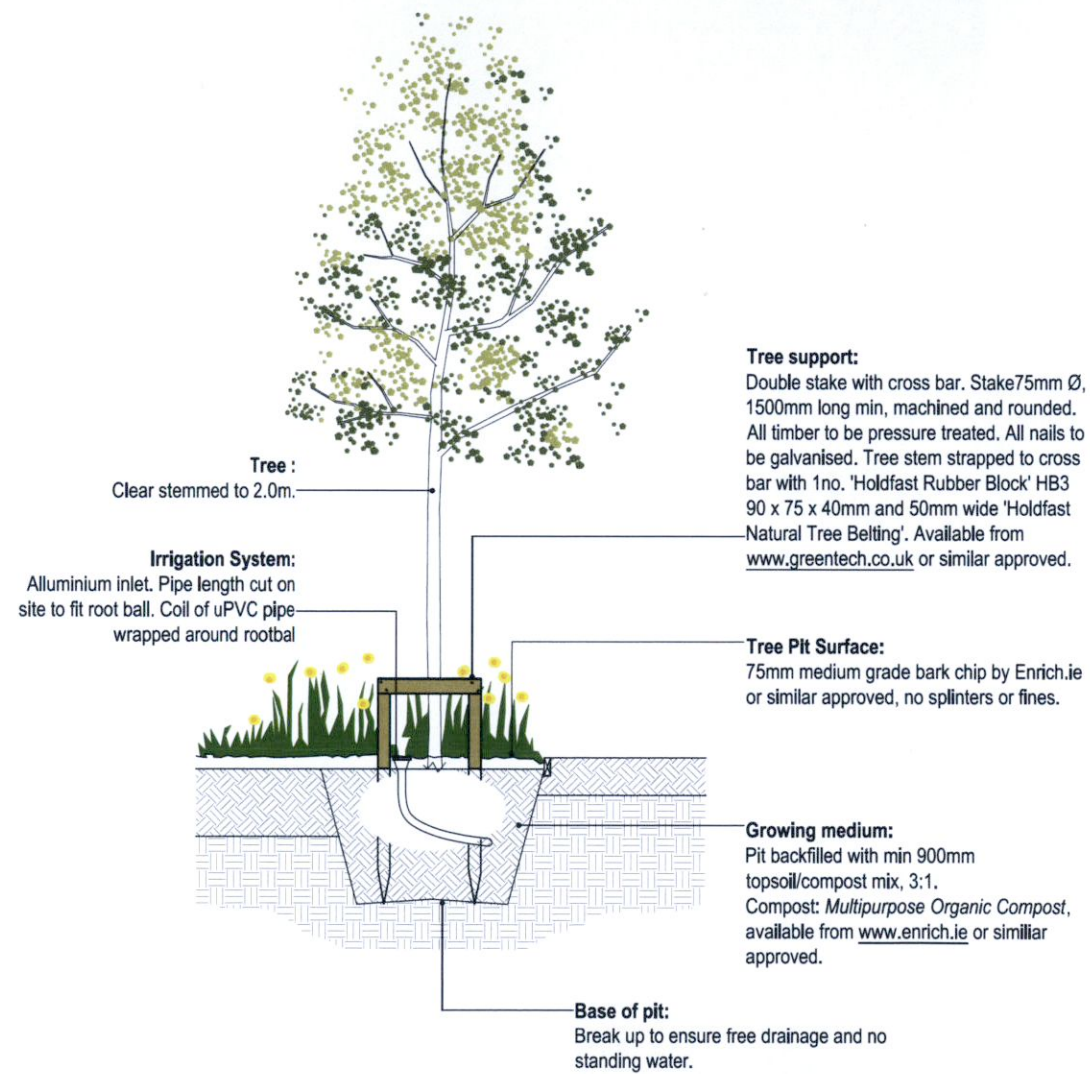
**Notes**

- Techni 'Standard' Trellis System by <http://www.tecni-cable.co.uk> or equivalent.
- 'Standard Grid System, composed of
  - 4mm 7x7 stainless steel wire hand tensioned between SG2.5 fittings (product code: 208.025.070)
  - PVC end caps on exposed wire ends.
  - Installed as per manufacturers recommendations, supplied in kit form based on above detail.
  - Dimensions of trellis panels to be confirmed upon survey of wall.

**Steel Wire Trellis Typical Detail**

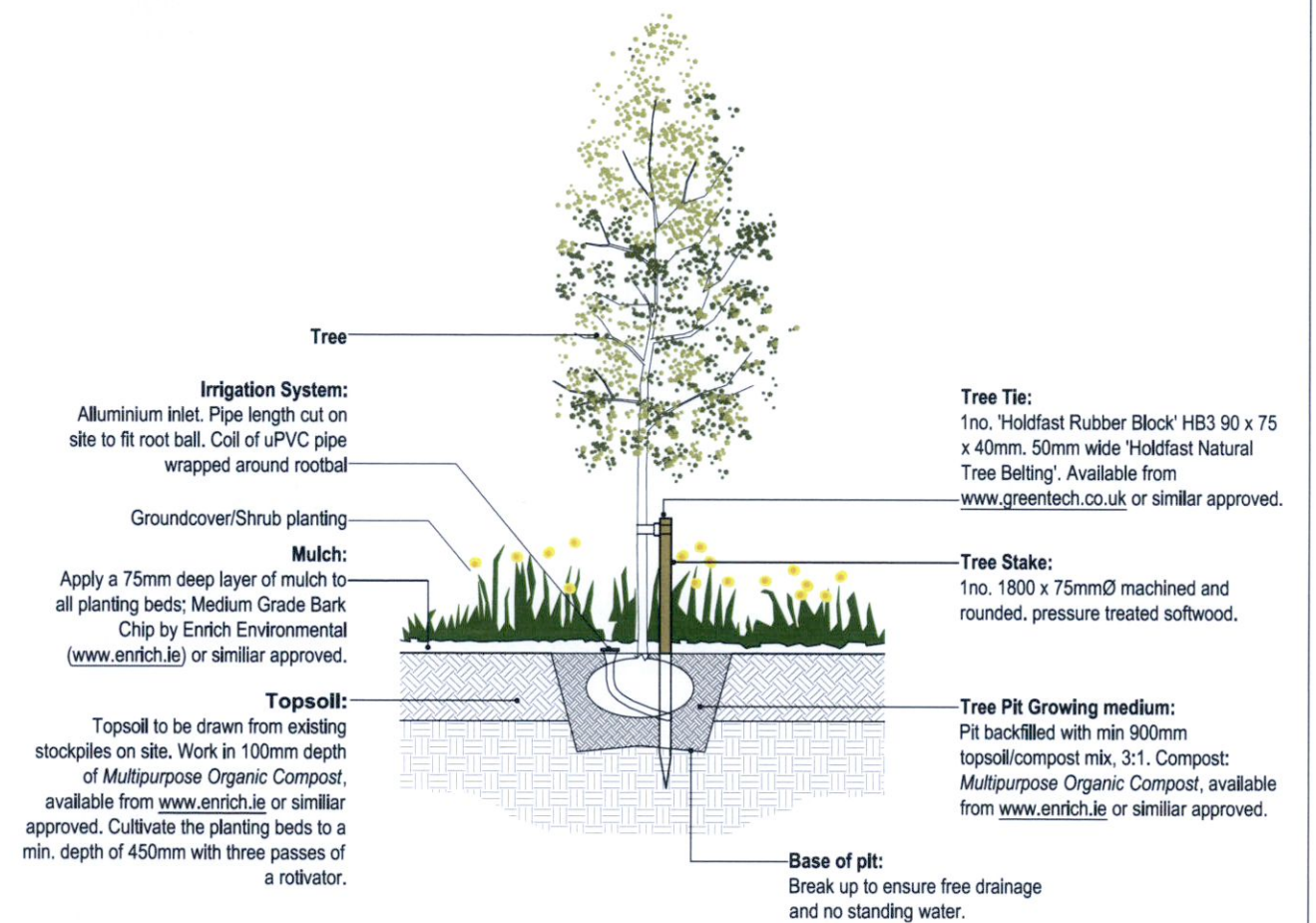
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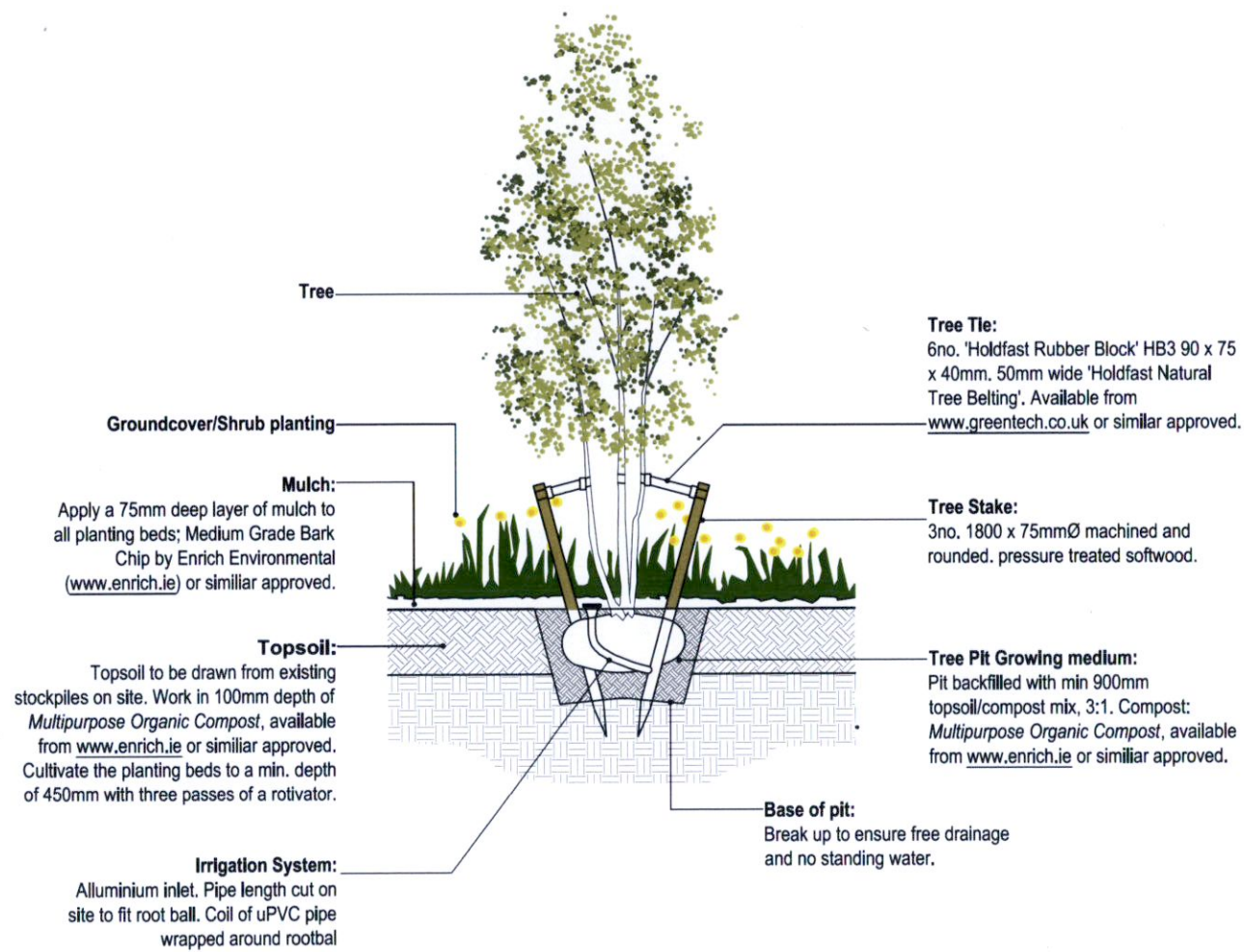
**Semi-mature and Heavy Standard tree planting in soft landscape**  
scale 1:50

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**Standard and Feathered Tree Planting in soft landscape**  
scale 1:50

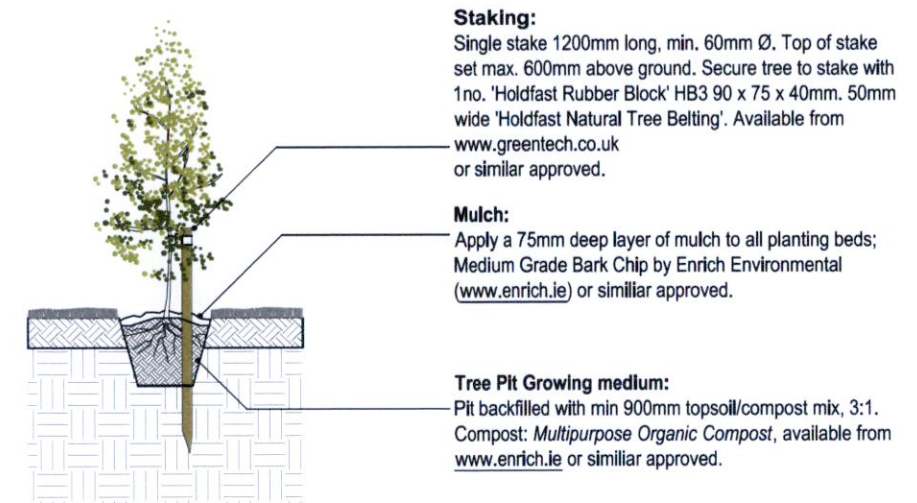
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**Multi-stem Tree Planting**

scale 1:50

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**Feathered Tree Planting - 1500-2000mm high**

scale 1:50

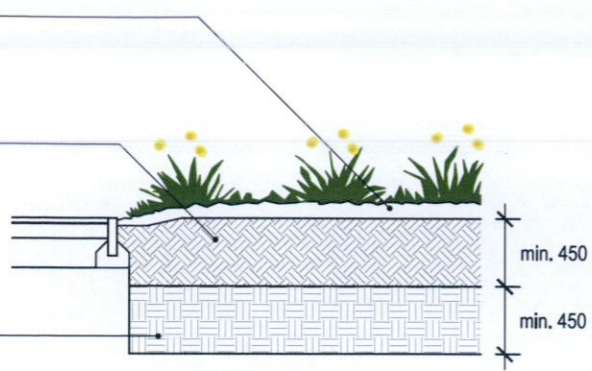
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**Groundcover Planting**

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

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

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

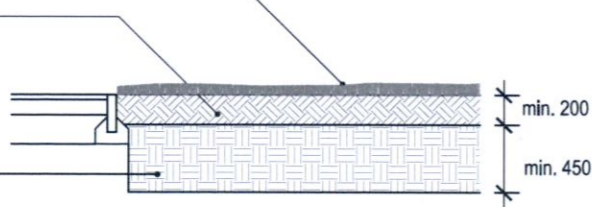


**Lawn**

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

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

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



**Gravel trim building facades**

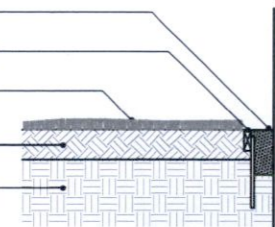
**Gravel trim:**  
min. 300mm depth layer of 10-20mm washed and graded pebble.

**Timber edging:** see adjacent detail

**Soft landscape**

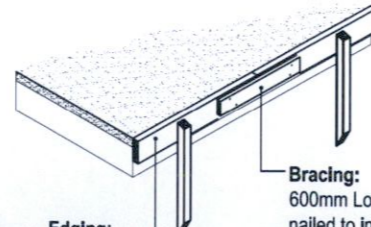
**Topsoil**

**Subsoil**



**NOTE:**

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



**Edging:**

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

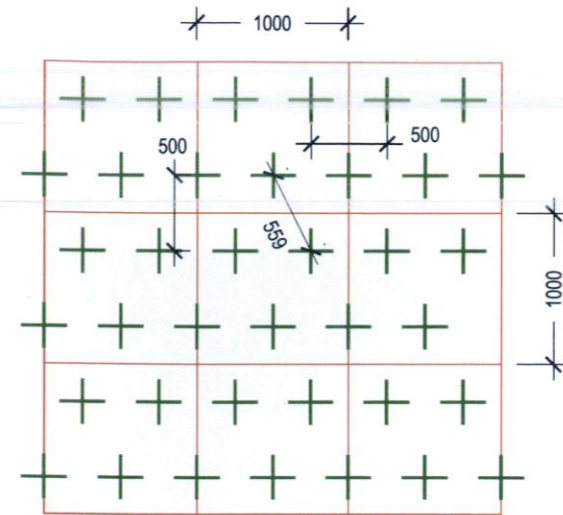
**Bracing:**

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

**Groundcover planting beds, lawn and gravel trims**

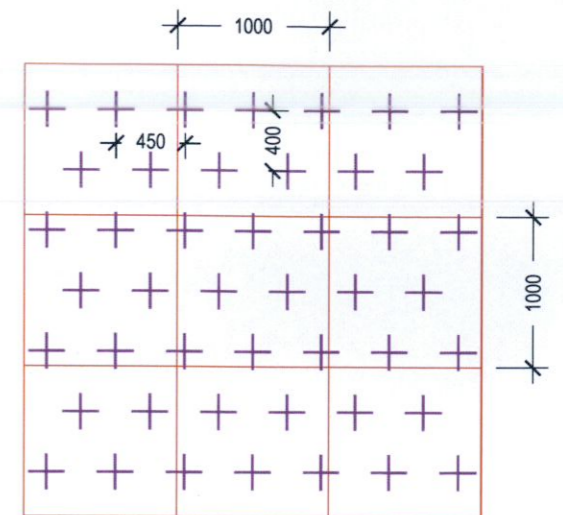
scale 1:50

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**Clipped shrubs:**

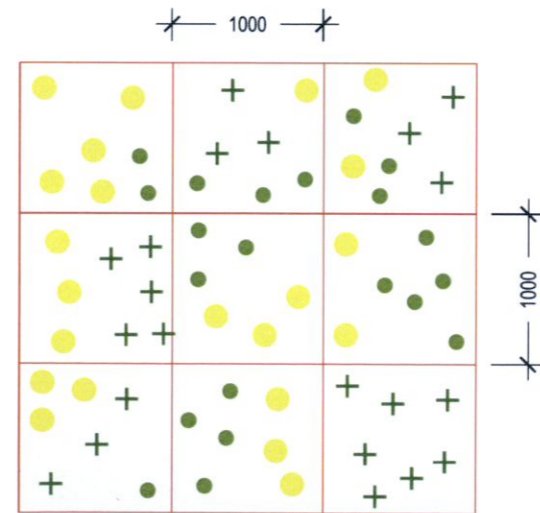
Density of plants typically 4 per sqm, all 2ltr cg. min.



**Groundcover shrubs:**

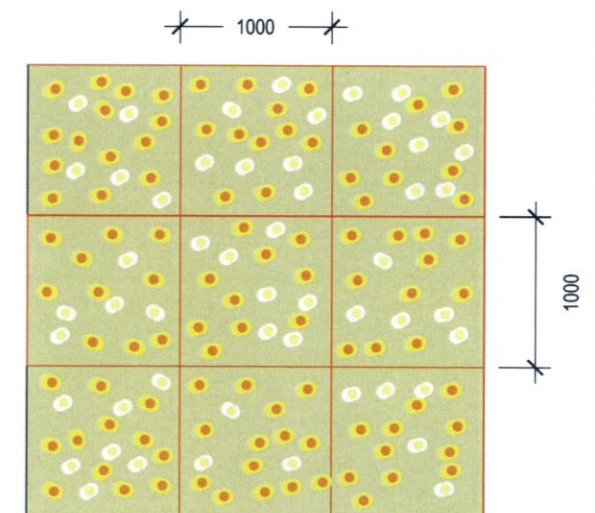
Planted at 5 per sqm, all 2ltr cg. min.

**Clipped Planting - Taxus, Buxus**



**Groundcover - mix of grasses and perennials:**

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



Density of bulbs typically 15-20 per sqm.

**Groundcover Mixes**

**Bulb drifts in grass**

**Setting out - clipped shrub planting, groundcover planting and bulbs**

scale 1:50

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## 9. Soft Landscape Specification

## Q28 Topsoil and soil ameliorants

To be read with Preliminaries/ General conditions.

### SYSTEM OUTLINE

- 115 SOIL SYSTEM FOR GRASS SWARDS FOR ALL GRASSED AREAS
- Composition:
    - Soil: Imported topsoil to BS 3882.
    - Ameliorants: Sanitized and stabilized composted materials.
    - Accessories: None.
- 125 GREEN ROOF GROWING MEDIA SYSTEM TO INTENSIVE GREEN ROOF
- Composition:
    - Topsoil: Imported topsoil from a specified source.
    - Ameliorants: as per specified product.
    - Accessories: as per specified product.
- 135 PLANTING BED SOIL SYSTEM FOR EXTERNAL PLANTING
- Composition:
    - Topsoil: Imported topsoil to BS 3882.
    - Ameliorants: Sanitized and stabilized composted materials.
    - Accessories: None.
- 145 PLANT PIT BACKFILLING SOIL SYSTEM FOR EXTERNAL PLANTING
- Composition:
    - Topsoil: Imported topsoil to BS 3882.
    - Ameliorants: Organic materials and Sanitized and stabilized composted materials.
    - Accessories: None.
- 155 MULCHING AND TOP DRESSING SYSTEM For external planting beds and tree pits
- Composition:
    - Material: Fine grade bark mulch.
- ### PRODUCTS
- 300 PREPARATION MATERIALS GENERALLY
- Purity: Free of pests and disease.
  - Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
  - Contamination: 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 or planting media, do not use subsoil contaminated with the above materials.
  - Objectionable odour: None.
  - Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

- 310 MATERIALS NOT PERMITTED
- Materials: Peat and Products containing peat.
- 315 IMPORTED TOPSOIL TO BS 3882 FOR EXTERNAL CONTAINER PLANTING, GRASS SEEDING, TURFING, PLANTING BEDS AND TREE PITS
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
  - Standard: To BS 3882.
  - Classification: Multipurpose.
    - Soil textural class to BS 3882, Figure 1:
      - Any class;
      - Clay loam; or
      - Sandy loam.
  - Source: Submit proposals.
    - Product reference: Submit proposals.
- 345 AGGREGATES FOR SITE MADE TOPSOIL
- Source: Contractor's choice.
    - Product reference: Submit proposals.
  - Reference, description and grading:
    - Sand: Coarse grained, sharp sand with neutral pH.
    - Grit: 2 mm single size pea shingle.
    - Crushed materials: Not required.
    - Other aggregates or particles: Light expanded clay aggregate.
  - Recycled content: 10% (minimum) to BS EN ISO 14021.
- 360 SANITIZED AND STABILIZED COMPOSTED MATERIALS CERTIFIED TO PAS 100 FOR SITE MADE TOPSOIL
- Standard: In accordance with PAS 100.
  - Source: Submit proposals.
    - Product reference: Enrich 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 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.
  - Compost Certification Scheme certification: Required.
  - Declaration of analysis: Submit.
  - Additional analyses: Not required.
  - Samples: Supply 5 kg sample before ordering.

## EXECUTION

- 610 TOPSOIL ANALYSIS
- Soil to be analysed: Imported topsoil.
  - Soil analyst: Submit proposals.
  - Samples: Collect in accordance with BS 3882.
  - Submit:
    - Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
    - Additional analysis: Not required.
    - Report detailing soil analyst's recommendations.
- 620 IMPORTING TOPSOIL
- Give notice: Before stripping topsoil for transfer to site.
    - Notice period: 7 days.
- 625 SAMPLE LOADS FOR IMPORTED TOPSOIL
- Deliver to site a sample load: of 5 kg.
  - Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
    - Notice period: 7 days.
- 630 DOCUMENTATION FOR IMPORTED TOPSOIL FOR PLANTING BEDS
- Timing: Submit at handover.
  - Contents:
    - Full description of all soil components.
    - Record of source for all soil components.
    - Record drawings showing the location and depth of all soils by type and grade.
    - Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
  - Number of copies: Three.
- 635 DOCUMENTATION FOR COMPOST AND COMPOSTED MATERIALS FOR COMPOST
- Timing: Submit at handover.
  - Contents:
    - Full description of all compost components.
    - Record of source for all compost components.
    - Analyst's report for each test carried out.
    - Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
    - Quality Compost Protocol certification: Not required.
  - Number of copies: Three.
- 640 DOCUMENTATION FOR PREPARATION MATERIALS FOR IMPORTED SOIL IMPROVERS
- Timing: Submit at handover.
  - Contents:
    - Full description of all components.
    - Record of source for all components.
    - Analyst's report for each test carried out.
    - Supplier's declaration of compliance with BSI PD CR 13456.
  - Number of copies: Three.
- 650 NOTICE
- Give notice before:
    - Setting out.
    - Spreading topsoil.
    - Applying herbicide.
    - Applying fertilizer.
    - Visiting site during maintenance period.
  - Period of notice: 2 weeks.
- 655 MECHANICAL TOOLS
- Restrictions: Do not use within 100 mm of tree and plant stems.
- 660 GRADING SUBSOIL FOR
- GRASSED AREAS;
  - WILDFLOWER AREAS;
  - ORNAMENTAL PLANTING BEDS;
  - AMENITY PLANTING AREAS; and
  - WOODLAND PLANTING AREAS
  - Standard: In accordance with BS 8601.
  - General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
  - Areas of thicker topsoil: Excavate locally.
  - Avoid compaction.
  - Excess subsoil: Remove.
- 665 SUBSOIL SURFACE PREPARATION FOR
- GRASSED AREAS;
  - WILDFLOWER AREAS;
  - ORNAMENTAL PLANTING BEDS;
  - AMENITY PLANTING AREAS; and
  - WOODLAND PLANTING AREAS
  - Standard: In accordance with BS 3882.
  - General: Excavate and/ or place fill to required profiles and levels, as section D20.
  - Loosening:
    - When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth:
      - Light and noncohesive subsoils: 600 mm.
      - Stiff clay and cohesive subsoils: 600 mm.
      - Rock and chalk subgrades: Lightly scarify to promote free drainage.
    - Wet conditions: Do not loosen subsoils.
  - Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
  - Remove from site: Arisings, contaminants and debris and Builders rubble.
- 670 INSPECTING FORMATIONS
- Give notice: Before spreading topsoil for areas to receive landscape planting.
  - Notice period: 7 days.

675 PREPARATION OF UNDISTURBED TOPSOIL

- Standard: In accordance with BS 4428.
  - Grading and cultivation: To suit cultivation operations specified in Q30.
- 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 months.
  - Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

680 SURPLUS TOPSOIL TO BE RETAINED

- Generally: Spread and level on site:
  - Locations: As directed by Landscape Architect.
  - Protected areas: Do not raise soil level within root spread of trees that are to be retained.

685 SURPLUS MATERIALS TO BE REMOVED

- Topsoil removal from site: Topsoil remaining after completion of all landscaping work.
- Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

690 TOPSOIL STORAGE HEAPS

- Location: Contractor's choice.
- Height (maximum): 1.0 m.
- Width (maximum): 2.0 m.
  - Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
- 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.

700 GRADING OF TOPSOIL

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
  - Hollows and ridges: Not permitted.
- Give notice: If required levels cannot be achieved by movement of existing soil.

705 HANDLING TOPSOIL

- Standard: In accordance with BS 3882.
- 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.

710 SPREADING TOPSOIL ON GRASSED AREAS and WILDFLOWER AREAS

- Standard: In accordance with BS 3882.
- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
  - Depth (maximum): 150 mm.
  - Gently firm each layer before spreading the next.
- Depth after firming and settlement: 200mm.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

710A SPREADING TOPSOIL ON SHRUB & PERENNIAL PLANTING BEDS

- Standard: In accordance with BS 3882.
- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
  - Depth (maximum): 150 mm.
  - Gently firm each layer before spreading the next.
- Depth after firming and settlement: 450mm.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

710B SPREADING TOPSOIL ON TREE PITS

- Standard: In accordance with BS 3882.
- Temporary roads/ surfacing: Remove before spreading topsoil.
- Layers:
  - Depth (maximum): 150 mm.
  - Gently firm each layer before spreading the next.
- Depth after firming and settlement: 1000mm.
- Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

715 LOOSE TIPPING OF TOPSOIL

- Standard: In accordance with BS 3882.
- 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.

718 FINAL CULTIVATION FOR GRASS SEEDING & EXTERNAL PLANTING GENERALLY

- Compacted topsoil: Break up to full depth.
- Tillth: Loosen, aerate and break up topsoil to a tillth suitable for blade grading.
- Depth: 150 mm.
- Particle size (maximum): 15 mm.
- Timing: After grading and fertilizing, and within a few days before seeding.
- Weather and ground conditions: Suitably dry.
- Surface: Leave regular and even.
- Levels: 25 mm above adjoining paving or kerbs.
- Undesirable material brought to the surface:
  - Remove visible weeds.
  - Remove roots and large stones with any dimension exceeding 50 mm.

720 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT

- In relation to adjoining paving, kerbs or hard surfaces: 25 mm above .
- In relation to dpc of adjoining buildings: Not less than 150 mm below.
- In relation to adjacent grass areas: 50 mm above.
- Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
- Sportsfields: To even levels and within the following permitted deviations:
  - From levels or gradients shown on drawings:  $\pm 75$  mm.
  - From line between boning rods 30 m apart:  $\pm 25$  mm.
- Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
- Adjoining soil areas: Marry in.
- Thickness of turf or mulch: Included.

730 GREEN ROOF GROWING MEDIUM INSTALLATION

- Handling: Minimize.
  - Conditions: Handle in the driest condition possible. Do not handle or install when wet or frozen.
- Layers:
  - Depth (maximum): 150 mm.
  - Sequence: Gently firm each layer before spreading the next.

810 APPLYING COMPOST TO IMPORTED OR SITE SOURCED TOPSOIL FOR EXTERNAL PLANTING

- Application rate for trees and shrubs: 50 mm thick.
  - Timing: Apply prior to cultivation.
- Application rate for grass: 25 mm thick layer.
  - Timing: Apply prior to cultivation.
- Application rate for planters: 50 mm thick layer.
  - Timing: Apply prior to cultivation.
- Other requirements: Submit 5kg sample before ordering.

825 APPLYING FERTILIZER TO PROPOSED GRASS AREAS TO SEEDED AREAS EXCEPT WILDFLOWER MEADOWS

- Application: Before final cultivation and three to five days before seeding/ turfing.
- Coverage:
  - Spread evenly, in transverse directions.
  - Rate: 70 g/m<sup>2</sup>.

830 APPLYING TOP DRESSING TO GRASS SEEDING

- Rate: 2-4 kg/m<sup>2</sup>.
- Timing: Apply prior to cultivation.

845 APPLYING LOOSE MULCH FOR PLANTING BEDS AND TREE PITS IN SOFT LANDSCAPING

- Timing: Immediately after planting.
- Preparation: Water soil thoroughly.
- Coverage of mulch (minimum):
  - Planting beds (depth): 75 mm depth.
  - Trees: 75 litres per tree position, 75 mm depth.
  - Container planting: 75 mm depth.
- Finished level of mulch: 30 mm below adjacent grassed or paved areas.

COMPLETION

910 APPLYING MAINTENANCE FERTILIZER TO GRASS SWARDS TO ALL GRASSED AREAS EXCEPT WILDFLOWER MEADOWS

- Duration: Carry out the following operations from completion of seeding/turfing until the end of the rectification period.
- Time of year: During April and May.
- Application: Evenly spread, carefully incorporating below mulch materials.
- Rate: To manufacturer's recommendations.

920 APPLYING MULCH

- Timing: At end of the rectification period.
- Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
- Planting beds: Re-mulch.
  - Depth (minimum): 75 mm.
- Trees: Remulch.
  - Depth (minimum): 75 mm.
- Container planting: Remulch.
  - Depth (minimum): 75 mm.



## 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.
- 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 LAWNS
- Type: Suitable for suppressing perennial weeds.
  - Timing: Allow fallow period before cultivation.
    - Duration: As manufacturer's recommendation.
- 250 SOIL REQUIREMENTS
- Type:
    - Seeded areas: Soil for grass swards, as section Q28.
    - Turfed areas: Soil for grass swards, as section Q28 .
    - Reinforced grass areas: As section Q28.

- 290 PREPARATION FOR HYDRAULIC SEEDING
- Clearance: Remove rubbish, and stones with any dimension exceeding: 50 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

- 311 GRASS SEED FOR LAWNS
- Supplier: Submit proposals.
    - Mixture reference: 'Utility/Play' mix by Coburns.
  - Application rate: 34-50 g/m<sup>2</sup>.
- 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.
- 322A QUALITY OF WILDFLOWER SEED FOR WILDFLOWER MEADOWS
- Standard: Seed to be sourced from a Department of Agriculture, Food and the Marine registered seed grower and harvester.
  - Germination testing: Not required.
  - Freshness of seed: Produced for the current growing season.
  - Samples: Submit when requested.
- 330 SOWING
- General: Establish good seed contact with the root zone.
  - Method: Manually broadcast, raked and rolled.
    - Distribution: As instructed by seed supplier.
- 335 GRASS SOWING SEASON
- Grass seed generally: April to October.
- 336 WILDFLOWER SOWING SEASON
- Wildflower seed generally: March to May or August to October.
- 340 PRE-EMERGENT HERBICIDE FOR LAWNS
- Standard: Pesticide Safety Directorate approved.
  - Application rate: In accordance with manufacturer's written recommendation.
    - Timing: Immediately after sowing.

350 TURF EDGING TO SEEDED AREAS ADJACENT TO PAVEMENT

- 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.

**TURFING**

405 CULTIVATED TURF FOR LAWNS

- Supplier: Turfgrass Growers Association (TGA) member, to TGA quality standards.
- Seed mixture: 35% Chewings fescue, 35% Slender red fescue, 20% Smooth stalked meadow grass, 10% Brown top bent.
- Properties of soil used for turf production: Peat-free, well drained sandy loam.

420 DELIVERY AND STORAGE

- Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
- 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.
- Certification:
  - Standard: To BS 3969.
  - Declaration: Species mix, including percentage of specified species.

423 INSPECTION OF TURF FOR LAWNS

- Sampling method: To BS 3969.
- Give notice: Before lifting turf.
  - Period of notice: 1 week.

430 TURFING GENERALLY

- Time of year: To be agreed.
- 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: Mulching and top dressing system, as section Q28.
- 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: Pointed softwood pegs, 200 mm long x 25 mm square.
  - Frequency of fixings: Each turf.
- Removal of fixings: Not required.

450 TRIMMING TURF

- Newly planted tree pits: Neatly cut away around individual trees.
  - Diameter: 1200 mm.
  - Tree pit surface: Respread existing mulch.

**PROTECTING/CUTTING**

530 FIRST CUT OF GRASSED AREAS

- Timing: When grass is reasonably dry.
  - Height of initial growth: 75 mm.
- 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: Contractor's choice.
- Arisings: Remove from site.

550 AREAS NOT TO BE CUT

- Do not cut:
  - Meadow grass containing wildflowers.

565 TIMBER/ PLASTICS EDGINGS

- Material: Pressure treated softwood board.
  - Size: 150 mm x 38 mm.
- Fixings: Nailed.
  - Pegs: 50 mm x 50 mm x 450 mm long.
  - Centres: 1200 mm.
  - Installation height: Flush.
- Curved boards: Closely spaced vertical grooves cut in the back to achieve smooth flowing lines.
- Preservative treatment: As section Z12 and Wood Protection Association commodity specification C4.
  - Type: To provide a 15 year service life.

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**

610 FAILURES OF SEEDING/TURFING

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Defective materials or workmanship: Areas that have failed to thrive.
  - Exclusions: Theft or malicious damage.
- Method of making good: Recultivation and reseedling/ returfing.
- Timing of making good: The next suitable planting season.

620 MAINTAINING LAWNS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Maximum height of growth at any time: 100 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: As clause Q30/145.

650 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS

- Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
- Preparation: Before each cut remove all litter and debris.
- Height and frequency of cut in first growing season:
  - Time of first cut: June/ July.
  - Height of first cut: 100 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: October, March and August.
  - Height of cut: 100 mm.
- Trimming: All edges.
  - Arisings: Remove.
- Watering: When instructed.

## 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: none.

#### 118 SOIL CONDITIONS

- Soil for cultivating and planting: Moist, friable and (except in 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.

#### 146 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As Soft Landscape Pricing Schedule.

#### 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: Two weeks.

#### 170 SOIL REQUIREMENTS

- Type
  - Planted beds: Planting bed soil system, as section Q28.
  - Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28.
- External container planting: Container planting growing media system, as section Q28.
- Mulch applied after planting: Mulching and top dressing system, as section Q28.

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

#### 216 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions and other criteria: To the relevant part of BS 3936.

#### 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.

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 CPSE '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: Black polyethylene bags.
- Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.
- Planting: Upright or well balanced with best side to front.

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.

**PLANT CONTAINERS**

**PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS**

300 HERBICIDE TO CLEAR EXISTING VEGETATION

- Locations: All planting areas.
- Type: Suitable for suppressing perennial weeds.
- Timing: Allow fallow period before cultivation.
  - Duration (minimum): As manufacturer's recommendation.

512 TREE PIT IRRIGATION AND VENTILATION ACCESSORIES

- Locations: As drawing 18KE01-DR-670.
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Type: Perforated plastics irrigation pipe with inlet.
- Pipe diameter: 60 mm.
- Ring diameter: 900 mm.
- Inlet: Black plastics, with cap or cast aluminium where indicated.
- Installation:
  - Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
  - Top cap of inlet: Protruding slightly above finished surround level.
  - Backfill material: Carefully compact in layers.

535 TREE STAKES

- Stakes: Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
  - Preservative treatment: Use pressure treated timber stakes.
- Stake size (minimum): 75 mm diameter.
- Stake length (minimum): 1800 mm.

546 SINGLE VERTICAL STAKING FOR Trees as indicated drawing 18KE01-DR-670

- Staking:
  - Position: Close to tree position on windward side.
  - Driving: Vertically at least 300 mm into bottom of pit before planting.
  - Backfilling: Consolidate material around stake.
  - Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
- Height of stakes: Cut off to approximately 600 mm above ground level.
- Ties: Product Reference - SRC Tree Strap 38mm.
  - Number of ties: One.
- Tying: Secure tree firmly but not rigidly to stake with ties. Prevent tree from touching stake using spacer blocks or cushions if required.
  - Position: Top tie within 25 mm of top of stake and additional ties equally spaced along the stake.
- Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.

- 550 DOUBLE STAKING FOR Trees as indicated drawing 18KE01-DR-670
- Staking:
    - Position: Either side of tree position and perpendicular to wind direction.
    - Driving: Vertically at least 300 mm into bottom of pit before planting.
    - Backfilling: Consolidate material around stake.
    - Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
  - Height of stakes: Cut off to approximately 600 mm above ground level.
  - Horizontal bracing: Timber cross bar, 75 mm x 38 mm x 900 mm.
    - Fixing: Firmly fix using nails on windward side of tree and as close as possible to the stem without making contact with the bark. Position cross bar horizontally and 25 mm from top of stakes.
  - Ties: Product Reference - SRC Tree Strap 38mm available from [www.landscapedepot.ie](http://www.landscapedepot.ie).
  - Tying: Secure tree firmly but not rigidly to cross bar. Prevent tree from touching cross bar using spacer blocks - product reference: SRC Cushion 38mm available from [www.landscapedepot.ie](http://www.landscapedepot.ie).
  - Nails for fixing ties, belts and webbing: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
  - Nails for fixing cross bars: To BS 1202-1, galvanized round wire, minimum 75 mm long and 3.75 mm gauge.

- 576 TREE PIT SURFACING - LOOSE FILL
- Surfacing material: Mulch, as section Q28.
  - Area: Full extent of tree pit surface.
  - Depth: 75 mm.
  - Watering: Water soil thoroughly before laying.
  - Installation: Ensure the base of the tree stem is kept free from loose filled material.

#### 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.

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

- 680 SETTING OUT
- Planting density: As drawing 18KE01-DR-671.
  - Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

#### PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

- 710 MAINTENANCE
- Duration: Carry out the operations in the following clauses from completion of planting until the end of the rectification 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: During the next suitable planting season.

- 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.
  - 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.
  - Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
    - Broken or missing items: Replace.
    - Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
    - Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
    - Ties: Adjust to accommodate growth and prevent constriction or abrasion.
    - Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
    - Frequency of checks: In accordance with the agreed maintenance schedule.
  - Watering: In accordance with the agreed maintenance schedule.

- 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.

- 780 MAINTENANCE INSTRUCTIONS
- General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide a schedule of any ongoing maintenance problems experienced during the rectification period.

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: All planting beds.
  - Duration: 18 months.
- Aims: Enhanced landscape quality and Improved landscape visual amenity.
- Restrictions: Refer to the agreed maintenance schedule.
- Results: Refer to the agreed maintenance schedule.

110 NOTICE

- Give notice before:
  - Application of herbicide.
  - Application of fertilizer.
  - Watering.
  - Each site maintenance visit.
- Period of notice: 2 weeks.

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: Submit proposals.
  - Method: Submit proposals.

152 PERFORMANCE CRITERIA FOR CONTROL OF INVASIVE PLANT SPECIES

- Specialist firms: Submit proposals.
- Species: Japanese knotweed.
- Location: Whole site.
- Requirement: Less than 10% cover.
  - Timing: As detailed in Local Biodiversity Action Plan.

155 WATERING

- Supply: Potable mains water or rainwater from storage tank.
- Quantity: Wet full depth of topsoil .
- 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 ARISING

- General: Unless specified otherwise, dispose of arisings as follows:
  - Biodegradable arisings: Remove to recycling facility.
  - Grass cuttings: Remove to recycling facility.
  - Tree roots and stumps: Remove from site.
  - Shrub and tree prunings: Remove to recycling facility.
  - Litter and nonbiodegradable arisings: Remove from site.

180 CHIPPING OR SHREDDING

- General: Not permitted on site.

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 and mole hills.
  - 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): 6 weeks.

250 LEAF REMOVAL

- Operations: Collect fallen leaves.
- Special requirements: None.
- Disposal: Remove from site for recycling.

255 FIRST CUT OF ALL GRASSED AREAS

- Height of initial growth: 75 mm.
- 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: Contractor's choice.
- Arisings: Remove.

270 MOWING ROUGH GRASSED AREAS

- Grass height: Maintain between 50 and 75 mm.
- Arisings: Spread evenly over cut areas.

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: 75 mm .
  - Frequency of subsequent cutting (minimum): Every 6–8 weeks until autumn.
  - Height of growth permitted (maximum): 150 mm.
- Height and frequency of cut in second growing season:
  - Time of cut: October, March and August.
  - Height of cut: 75 mm.
- Trimming: All edges.
  - Arisings: Remove.
- Watering: As schedule and when instructed.

275 CUTTING SUMMER FLOWERING WILD FLOWER MEADOWS

- Times of year/ Frequency of cutting: July and September.
- Height of cut: 75 mm.
- Arisings: Leave for 2–3 days after cutting then remove.

285 TOP DRESSING

- Location: All lawns.
- Timing: Following scarification and aeration.
- Material: Compost/ sand/ loam mix.
- Supplier: Submit proposals.
  - Product reference: '80/20 Fine Turf Top Dressing' by Pitchcare Ireland.
- Declaration of analysis: Submit.
- Additional analyses: Not required.
- Samples: Supply 5 kg sample before ordering.
- Application rate: 2-4 kg/m<sup>2</sup>.

295 SPIKING

- Location: All lawns where waterlogging occurs, to be used as an initial remediation measure. Where problems persist see clause 307.
- Timing: As necessary to relieve compaction and waterlogging.
- 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.
- 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: Where drainage problems persist on recreational lawn areas.
  - Timing: As necessary to relieve compaction.
  - Depth: 100 mm.
- 310 RE-FORMING GRASS EDGES
- Location: Where damage occurs.
  - Edges: Draw back soil and re-form edges to clean straight lines or smooth flowing curves, sloping slightly back from vertical.
- 320 LEVELLING HOLLOW AND BUMPS IN TURF
- Standard: To BS 7370-3, clauses 12.4 and 12.5.
- 325 RELIEVING SURFACE COMPACTION IN TURF
- Standard: To BS 7370-3.
  - Method: Spiking.
  - Top dressing: Medium to fine sand.
    - Depth: 2-3 mm.
- 330 SELECTIVE HERBICIDE
- Location: All lawns.
  - Herbicide: Suitable for suppressing perennial weeds.
  - Areas not to be sprayed: Bulb and corm planted areas when in leaf.
- 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 'Managing Japanese knotweed on development sites. The knotweed code of practice'.
  - Application: In accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.
  - Arisings: In accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.
- 350 FERTILIZER - SPRING APPLICATION
- Type: Organic.
  - Application rate: 60 g/m<sup>2</sup>.

- 375 PEST CONTROL
- Location: Ornamental lawns.
  - Treatment: Fungicide.
    - Manufacturer: Submit proposals.
    - Product reference: Submit proposals.
  - Timing: As manufacturer's recommendation.
- 381 REINSTATEMENT OF WORN OR DAMAGED LAWNS
- Worn or damaged areas: Make good by turfing or reseeding:
    - Turfing standard: To BS 7370-3, Clause 12.2.
    - Reseeding standard: To BS 7370-3, Clause 12.6.
  - Turf or seed: To match existing in appearance and quality.
  - 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: Stake and tie plants using bamboo canes and flower canes where required.
    - Length: To suit plant height.
    - Maintain throughout the growing season.
  - Gaps in planting: Refill by replanting.
  - 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 fertilizer at a rate of 60 g/m<sup>2</sup>.
- 470 FLOWER BEDS GENERALLY
- Operations:
    - Remove: Dead flower heads, fallen leaves, litter and debris.
    - Weeds: Thoroughly hand weed.
    - Cultivate: Lightly hoe.
    - Trim: Clip grass edges.
  - Fungicide: Not required.
  - Insecticide: Not required.

#### SHRUBS/TREES/HEDGES

- 500 ESTABLISHMENT OF NEW PLANTING
- Duration: 18 months.
  - Weed control:
    - Method: Keep planting beds clear of weeds by maintaining full thickness of mulch.
    - 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: In accordance with the agreed maintenance schedule.

510 TREE STAKES AND TIES

- Inspection/ Maintenance times: As scheduled 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: 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.

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.

537 NESTING WILD BIRDS

- Survey: Before starting hedge or tree work during the period of February to August (inclusive), carry out a survey by a qualified ecologist and submit report.
- Accidental disturbance: Report immediately.

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: Approved specialist contractor.

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.

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: 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: Suitable mechanical cutters.

611 TRIMMING NONTAPERING ESTABLISHED HEDGES

- Time of year: 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: Suitable mechanical cutters.

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.

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: None.
- Dressing: Slow release fertilizer:
  - Type: 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.

655 WEED CUTTING BY HAND OR MACHINE

- Undesirable grass, brambles and herbaceous growth: Cut down cleanly to a maximum height of 25 mm.
- Herbicides: Remove arisings before application.

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.

685A SOIL LEVEL ADJUSTMENT

- Level of soil/mulch at edges of beds: Reduce to 25 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: Twice per year.
- 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.

700 SNOW REMOVAL FROM SHRUBS/ TREES

- Standard: To BS 7370-4.
- Plants subject to snow removal: As instructed.
- Timing: Within 24 hours of snowfall.

705 WINTER LEAF REMOVAL

- Operations: Take down temporary leaf fences. Collect accumulations of drifted leaves from the vicinity and from planting beds.
- Arisings: Remove to recycling facility.

**TREE WORK**

810 TREE WORK GENERALLY

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Protection: Avoid damage to neighbouring trees, plants and property.
- Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Removing branches: 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.

825 PREVENTION OF DISEASE TRANSMISSION

- Standard: To BS 3998.

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 Ivy where instructed.

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: Reduce crown by 15%.

845 CROWN LIFTING

- Clearances: Remove branch systems to give clearance.
  - Height: 2.5 m above footpaths.
- 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: 20 %.
- Cutting: Make no cuts of more than 50 mm diameter.
  - 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 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:
  - Treatment: 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: Do not cover.

**HARD LANDSCAPE AREAS/FENCING**

900 SNOW CLEARANCE

- Clearance: When instructed.
- Deicing: To footpaths.
  - Material: Rock salt to BS 3247.
  - Timing: When freezing precipitation is forecast.
  - 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: In accordance with the original paving specification or BS 7370-2, clause 4.12.
- Stain removal: In accordance with BS 7370-2, table 4.

915 PAVING SEALANT

- Type: Clear solvent based polymer sealer.
- Manufacturer: Adseal.
  - Product reference: Heavy Duty Sealer.
- Application method: Spray.
  - Coats: Two coats applied at right angles to each other.
  - Coverage: 5-9 m<sup>2</sup>/L.

920 FENCING

- Fences: Inspect and repair to maintain protection against stock.

930 GRAFFITI REMOVAL

- Method: Chemical poultice.
- Subsequent treatment: Not required.
  - Finish: n/a.



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