

# Cross Guns Bridge, Dublin 20

## Landscape Report

Prepared for Bindford Ltd.

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## 1. Responses to An Bord Pleanála Pre-application Consultation Opinion

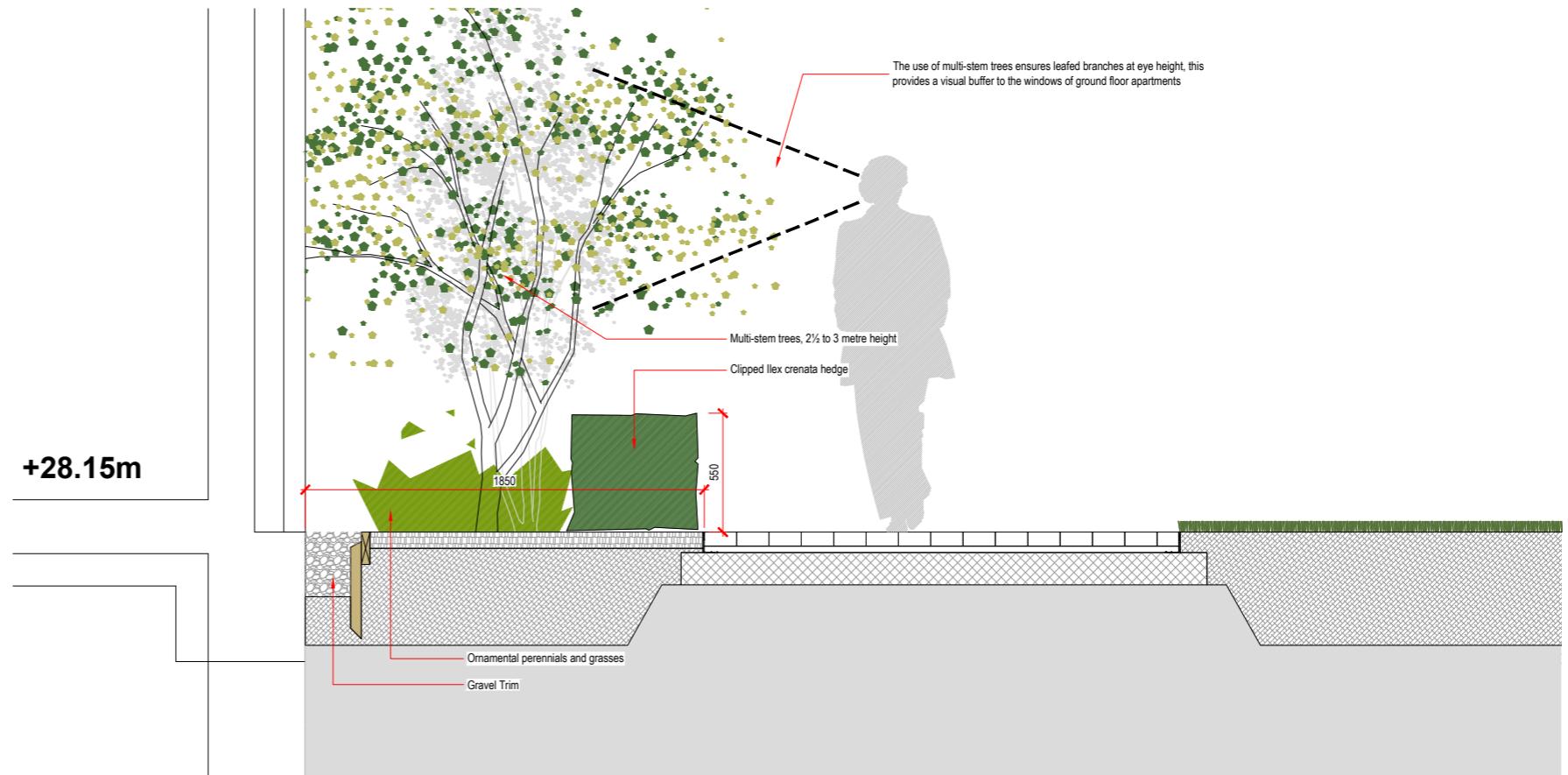
*4. Further elaboration of measures to avoid overlooking and loss of privacy due to overlooking within the development and to protect the privacy of ground floor dwelling units adjoining areas of open space.*

Please see Section B-B. This section illustrates a worst-case scenario in terms of the space between pedestrian circulation and ground floor apartment windows.

In this instance, a separation distance of 1.85metres is provided, the majority of windows at ground floor level will enjoy a buffer of 2metres and greater.

Planting is used to establish a visual barrier preventing passers-by from seeing into ground floor apartments. Multi-stem trees are favoured in this regard as they provide a leafed canopy at eye level. In wintertime the branches of these trees will continue to provide screening, particularly as the trees specified are reasonably densely branched.

A Clipped Holly hedge will be used to line the pathways approaching the entrance cores of the blocks, this will ensure that there is no encroachment of the planted buffer.



**9. Further elaboration of the treatment of the access roadway between Phibsborough Road and the development site should be provided, which should be included in the DMURS design statement. Quality Assessments, particularly in respect of pedestrian and cycle access should be provided, in accordance with DMURS advice note 4. The final configuration of the entrance plaza and measures to avoid conflict between pedestrian and vehicle movements should be clearly defined.**

The access roadway has been designed with regard to the recommendations of the Design Manual for Urban Roads and Streets (DMURS), specifically section 4.3.4 Pedestrianised and Shared Surfaces. The guidance recommends that shared surfaces are highly desirable where,

- Movement priorities are low and there is a high place value in promoting more liveable streets (i.e. homezones), such as on Local streets within Neighbourhood and Suburbs.
- Pedestrian activities are high and vehicle movements are only required for lower level access or circulatory purposes. This include streets within Centres

where a shared surface may be preferable over full pedestrianisation to ensure sufficient activity occurs during the daytime and the evening period.

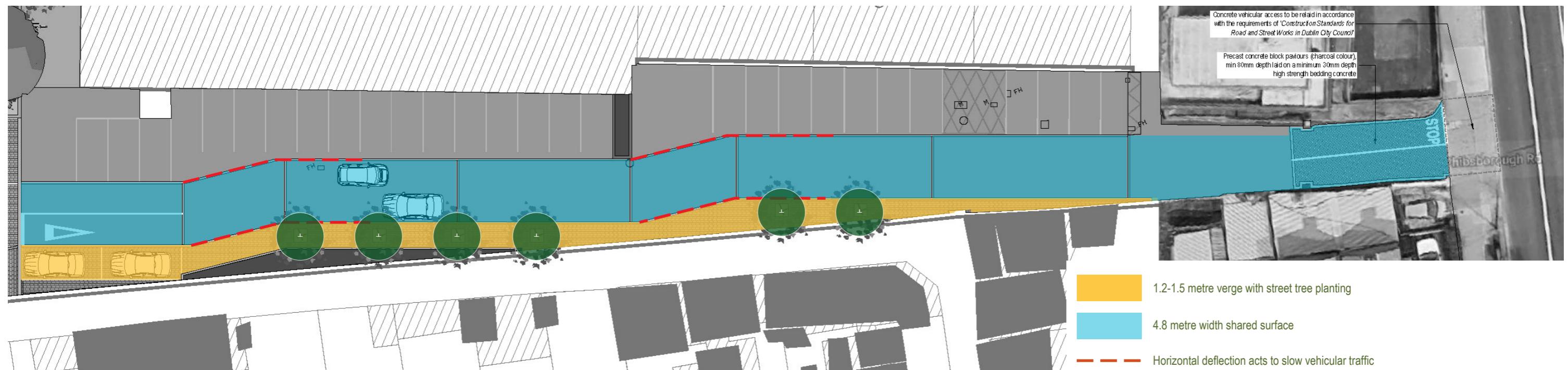
In relation to the proposed development, It is considered that the guidance outlined above provides a clear rationale for the use of a shared surface treatment. The facilities to be provided place a strong emphasis on cycling and walking as the primary modes of transport and mobility, and there is a relatively low provision of car-parking spaces given the developments proximity to the city centre and public transport routes generally.

Therefore, vehicle movements will be infrequent, particularly as the proportion of residents that will own cars will be low.

The shared surface design is informed by the "Adamstown Street Design Guide", this document is referenced within DMURS and guidance is shared between both documents. The guide elaborates on typical homezone layouts and materiality. Principally, it recommends a 4.8metre width shared surface with a 1.2 to 1.5m verge to one or both sides. The verge provides space for tree planting and provides a step-off zone for pedestrians in the event that two cars are passing. It also proposes the use of cross-banding in the shared surface, this elaboration indicates to drivers that they are not in a vehicular priority zone.



Shared Surface treatment in Adamstown Co. Dublin



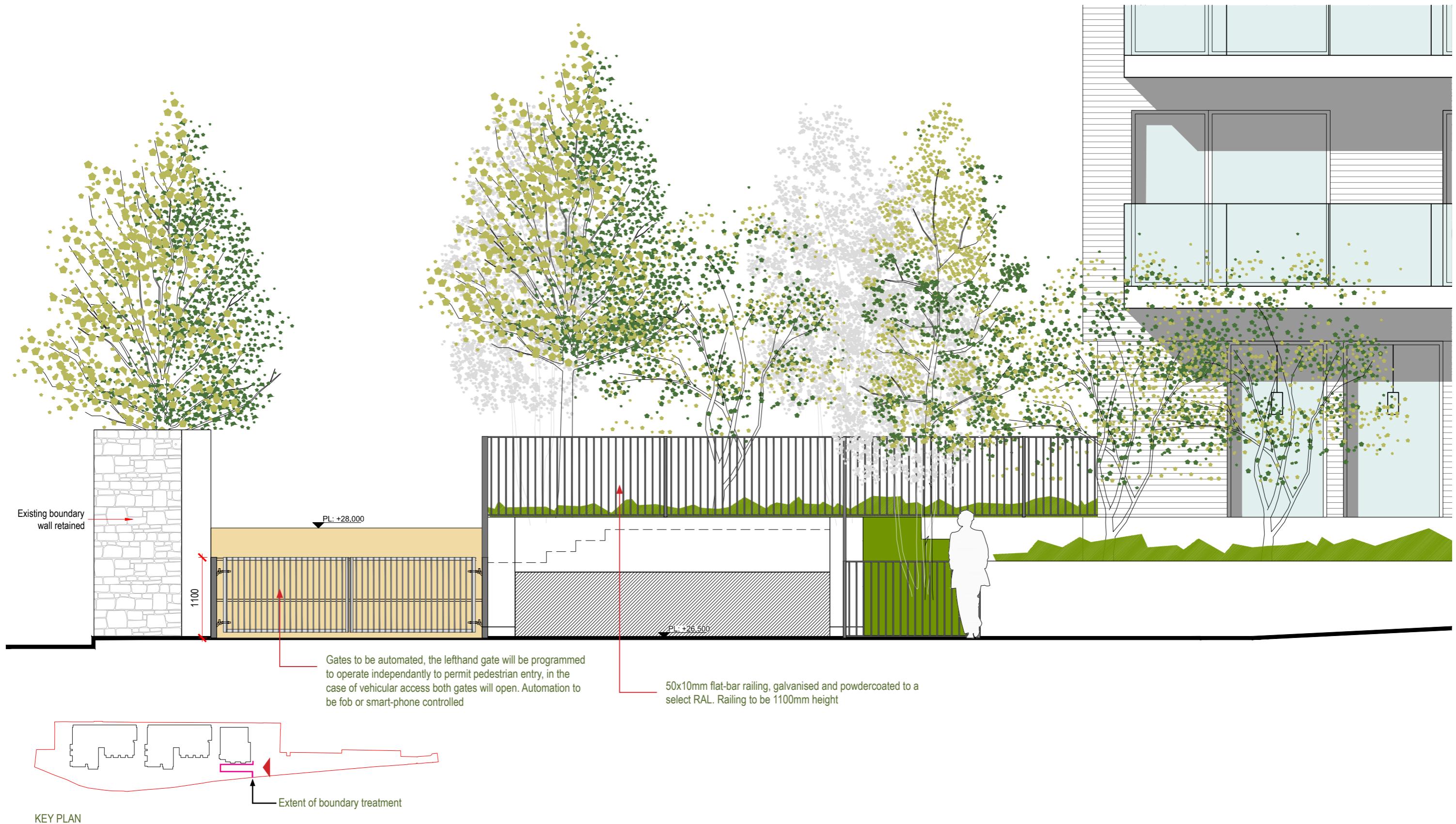
*10. Further consideration should be given to the management of public open space and the distinction between communal and public spaces. Furthermore the relationship with an area of open ground to the east of the site should be considered and addressed in the plans.*

A low fence will be provided to delineate the separation between publicly accessible space and private communal space. The fence will be approximately 1.1 metres in height with double gates to facilitate both pedestrian and vehicle access. The gates will be programmed so that only one will open for pedestrians passing through, they are secured against casual entry as residents will be provided with a fob, or alternatively entry will be facilitated using a smartphone app. The height of the fence is sufficient to implement a barrier without being perceived as defensive. See gate and fence detail overleaf.

The area of open ground between the North City Flour Mills building and the public plaza is not in the ownership of our client. We have proposed a treatment for this space; however, it could only be implemented with the agreement of the landowner. The treatment is very simple and converts the presently overgrown alleyway into a much more visually permeable space. Tree planting is introduced to the rear of the alley, groundcovers could also be added but restricted to low growing varieties to avoid opportunities for concealment. The front of the space is resurfaced in a hard-binding gravel to improve accessibility. Cycle stands are also added and could be for the exclusive use of the Mills residents. The cycle parking provides a degree of passive surveillance by generating footfall to the area and giving it a purpose



## Boundary Detail / scale 1:50



## 2. Site Context

The development site is a former bakery mill and is located adjacent to Cross Guns Bridge, Phibsborough.

It currently comprises two double-pitched factory warehouses located either side of large concrete silos which rise to a height of 27.5 metres. Smaller ancillary extensions adjoin the primary warehouse to the west of the site. The buildings are in various states of disrepair, having lain vacant since the closure of the Shandon Mill Bakery. The vast majority of the site is surfaced in concrete and bitumen-macadam, vegetation is self-seeded pioneer species typical of urban brownfield sites.

The premises is bound to the south by an alley which provides rear garden access to properties on Leinster Street North, the boundary wall itself is of rubble stone construction and is topped with barbed wire coils. The northern boundary is of similar construction to its southern counterpart though its height is extended with a wire mesh fence.

The western boundary of the site is delineated by four rear gardens belonging to three-storey duplexes and an accompanying car park for residents, the dividing wall is of block stone construction and is topped with steel railings.

The site is accessed from Phibsborough Rd and shares its access with the North City Flour Mills protected structure, now converted to apartments. The approach is lined with resident's car parking.



Aerial photograph of the site taken from Google Earth 2019.



Cross Guns Quay facing west



Northern boundary facing west



Southern boundary at right hand side, facing west



Warehouse undercroft



North-west corner facing south



Southern boundary wall



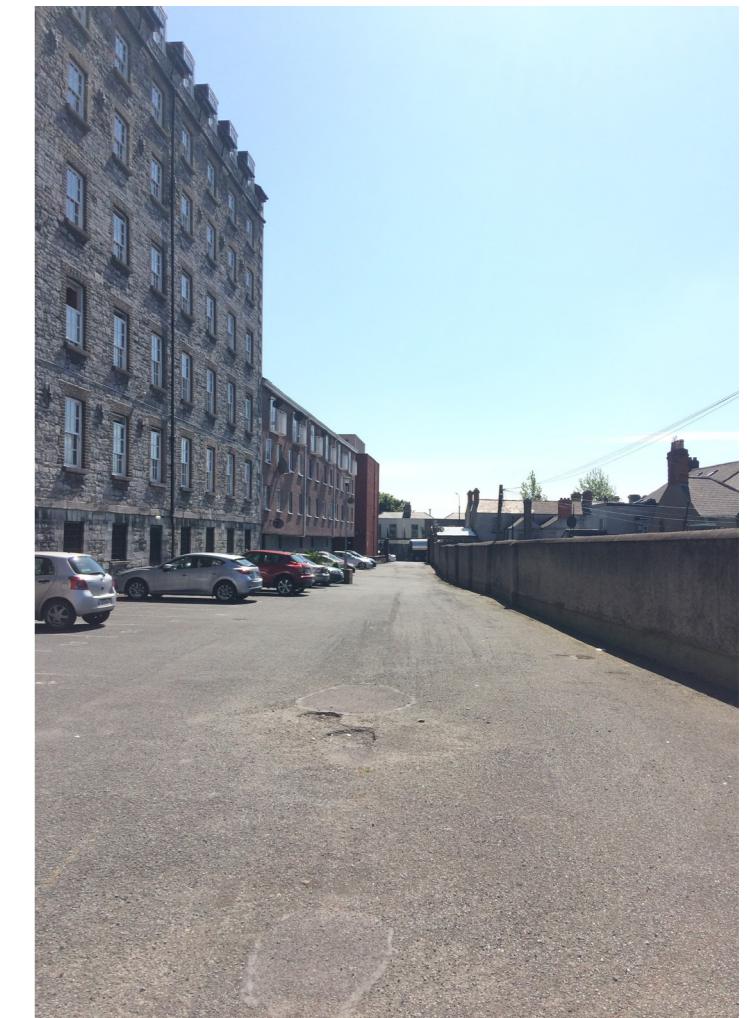
Facing west with southern boundary at left hand side



North-east corner facing west, silos are visible



Southern pathway facing west



North City Flour Mills Protected Structure on left, facing east toward Phibsborough Road



Public open space with stepped and gently sloped access in accordance with Technical Guidance Document Part M



### 3. Landscape Proposals

The proposed development is approximately 7269m<sup>2</sup> in area and includes three blocks ranging in height from three to twelve storeys aligned on an east-west access. The landscape design allocates space for both public use communal-private use.

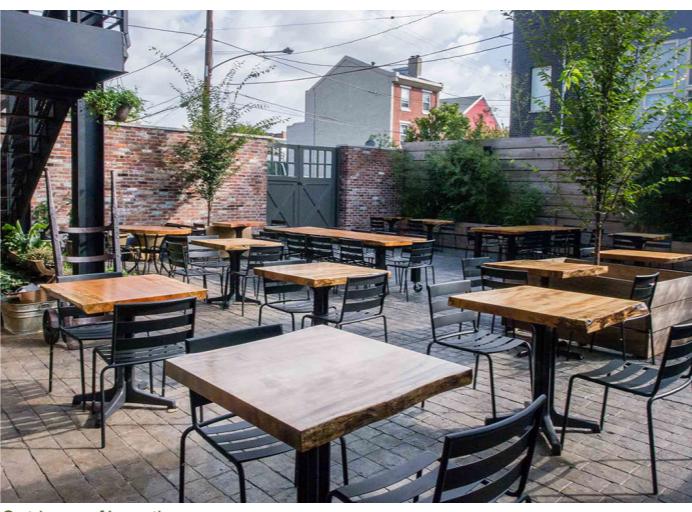
#### Entrance

The entrance to the site from Phibsborough Road is located at its easternmost edge and will be designed following the agreed principle set out in Planning Ref. 2402/14, refer also to drawing 20-011 - P195 submitted by Waterman Moylan Consultants, as part of this application, for a detailed layout. The vehicular and pedestrian approach which runs parallel to the North City Flour Mill Apartments is treated as a shared surface Homezone and designed as per the recommendations of the "Design Manual for Urban Roads and Streets" (DMURS). DMURS proposes, among other measures, that material transitions are used to alert drivers of shared user priority with pedestrians, perpendicular banding is proposed in this regard to segment and visually shorten the carriageway. As is currently the case, no kerb transitions will be present.

Additionally, the inclusion of step-off zones for pedestrians along both sides of the shared space will enhance pedestrian comfort and safety. This zone will be used to introduce tree planting, framing the view into the proposed new development. The existing parking bays will be surfaced in a permeable block paviour to aid drainage whilst parking allocation will remain as exists currently.



Stone Setts



Outdoor café seating

#### Public Open Space

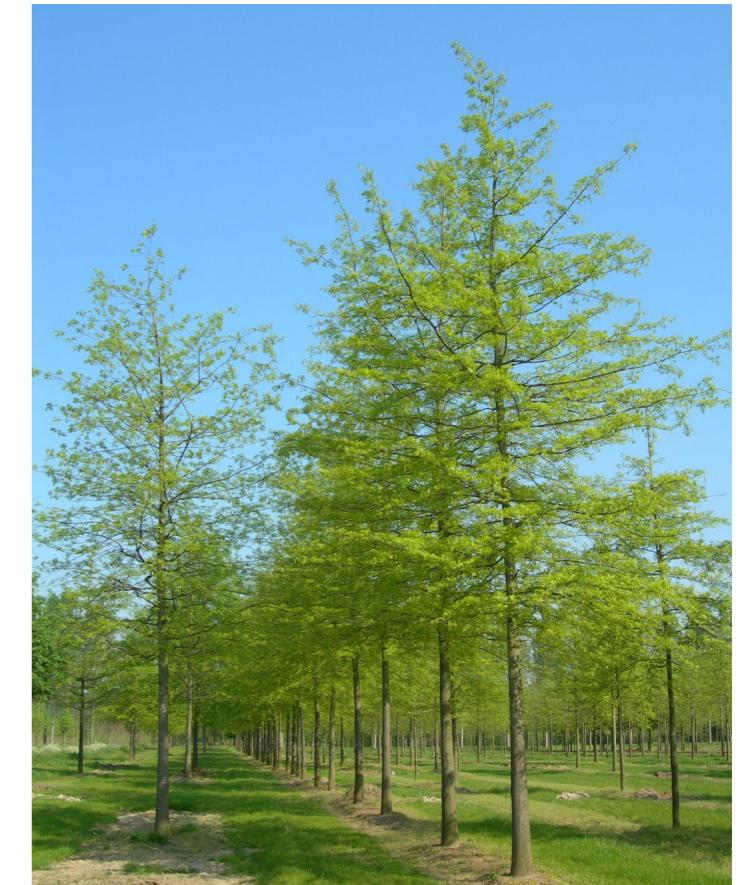
The area immediately east of Block C will be allocated for public open space. Due to the level difference on site, the public space is bisected by a wide stepped approach which forms an upper and lower terrace. Both terraces will be furnished with bespoke hardwood furniture elements that complement the ground floor café in Block C, and invite opportunities for outdoor socialising which will bring animation to this public space. In conjunction with the steps, a gently sloped access will also be provided - both approaches are designed in compliance with the requirements of Technical Guidance Documents Part M.

The public space will be paved in natural stone setts. Setts and cobbles form part of Dublin's urban heritage and so their traditional aesthetics are adopted as a compliment to the vernacular architecture exhibited by the canal-side mill building. Similarly, the modernity of the proposed residential blocks will be reflected in contemporary furniture, lighting columns and planting. A layered materiality is therefore achieved which harmonises the juxtaposition of old and new.

It is hoped that this public space will be seen as a regenerative addition to the canal-side landscape at Cross Guns Bridge and one that brings life and animation to the towpath between the 5th and 6th locks.



Contemporary bespoke furniture



Quercus palustris - focal point trees in public open space



Feature lighting columns



Note that the layout illustrated partially differs to that proposed in drawing 20D04-DR-200

1. Natural stone paving in a heritage 'fan' pattern
2. Outdoor café seating
3. Herbaceous planting and ornamental grasses mix
4. In-situ concrete upstands with a decorative exposed aggregate finish



Public open space perspective view



### Private Communal Space

Private communal space is designed with reference to a project by Mutabilis Landscape Architects in Boulogne Billancourt, Paris. This project is of a similar nature to our proposed scheme in that it focuses on open spaces within a multi-storey apartment development and seeks to reduce the overall scale of built elements in pursuit of a prominent landscape character. Large spaces are divided and sub-divided by desire-line pathways which converge or diverge as dictated by how people move through the site to access the different blocks. Divergent pathways create opportunities for infills of planting which effectively create islands of green, converging pathways are flanked by generously planted set-backs that offer privacy to ground level terraces. This dichotomy of desire lines creates transition zones that separate larger, more open areas, the effect is emphasised through the use of minimalist pergola structures that act as gateways. The effect is that scale is manipulated to achieve an intimate character where appropriate, and to create a sense that one is journeying



Boulogne, Billancourt Residential Development by Mutabilis Landscape Architects

through the space – every viewpoint offers only a partial glimpse of what lays beyond.

Our proposed scheme at Cross Guns bridge is influenced by this design intent. A large open space or central courtyard is proposed to the south of Block A and is the primary area of congregation for residents, either side of this, pathways diverge around planted islands or meander between apartment blocks – these are the transitions that precede the next open space. In our scheme, the next open space could refer to the public plaza and even the canal towpath which is accessed midway along the northern boundary.

### Central Courtyard

The Central Courtyard is approximately 620m<sup>2</sup> in area. Located directly between Blocks A & B, it is composed of an amenity lawn area, planters with bespoke corten edging and ample furniture elements to invite residents to linger



Pergolas at Cork Street Student Accommodation by Áit Urbanism + Landscape

in the space. The courtyard will enjoy a favourable south facing aspect and will receive good sunshine throughout the day, for this reason it is envisaged to be the hub of the development in which neighbours may congregate and socialise. The courtyard will exhibit a contemporary aesthetic - focal lighting masts, high quality paving and unique furniture will define the space, as will mature tree planting that frames the courtyard and reduces the perceived scale of the surrounding elevations.

The courtyard is the location for 4no. accessible parking spaces. This places less mobile residents at the centre of the scheme and at a roughly equal distance to each of the building cores. The spaces will be paved in grasscrete or other reinforced grass surface that helps to balance the perceived extent of hardscape.

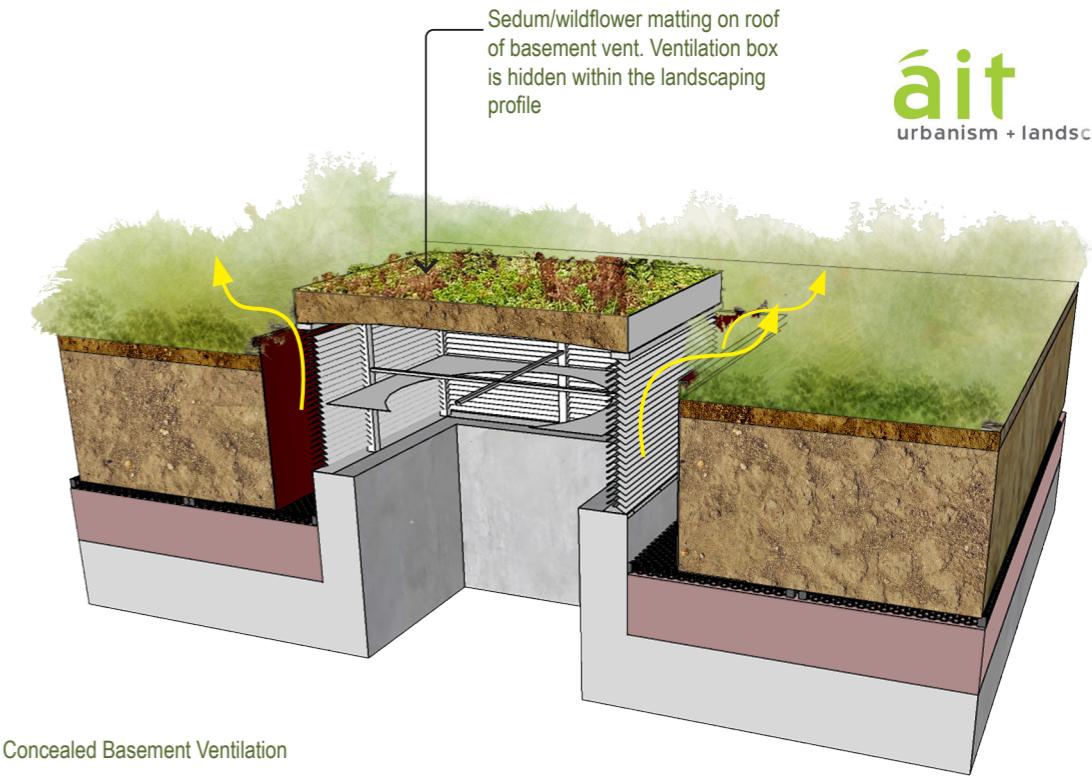
Shrub and groundcover planting is a crucial element in this and all areas of the scheme. Planting will be robust but ornamental in nature, further helping to define the feel of the spaces whilst also filling out the generous buffer zones between private ground floor terraces and communal pathways. Planting will chosen for aesthetics, hardiness and biodiversity value, landscaped areas are of such a generous scale that the development can become an important link as part of the Royal Canal Green Corridor.

### Trim Trail and Play Area

Given the generous outdoor areas provided as part of the scheme, an opportunity exists to introduce further amenity features that often cannot be accommodated in urban infill schemes. The western extremity of the site, between the boundary and Block A, offers ample open space in which it is proposed to introduce fitness or trim trail equipment. The equipment is laid out in an informal manner, located either side of a meandering pathway that is also flanked by lush groundcovers and tree planting. Similarly, play features can also be added in a randomised approach amongst trim trail pieces - this offers a departure from overly formalised and sometimes sterile fenced playgrounds. It is envisaged that this space could be a useful resource for residents of all ages, another space in which to socialise, play and keep fit.



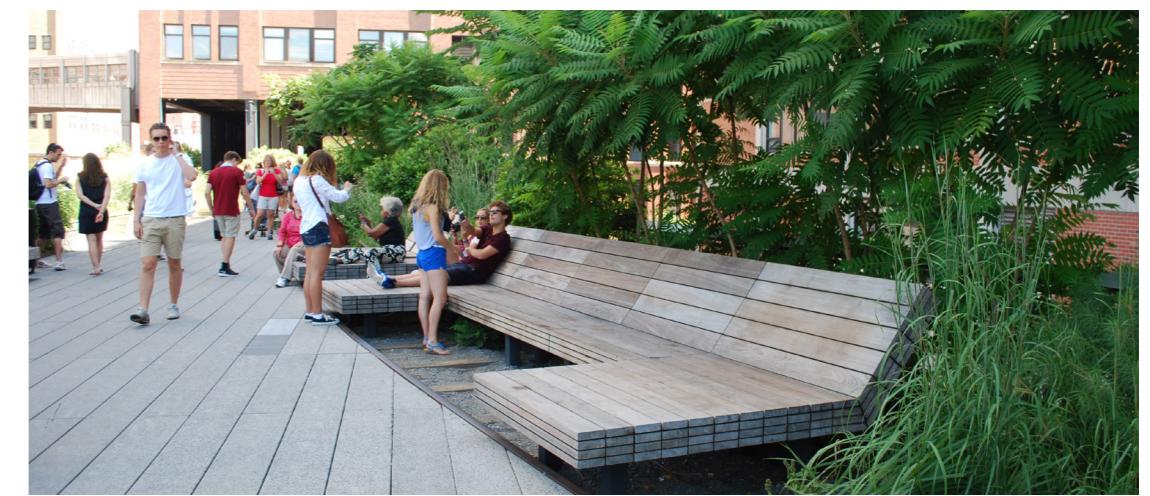
Perspective view to convey a sense of materiality employed in the scheme, note that the layout illustrated partially differs to that proposed



Concealed Basement Ventilation



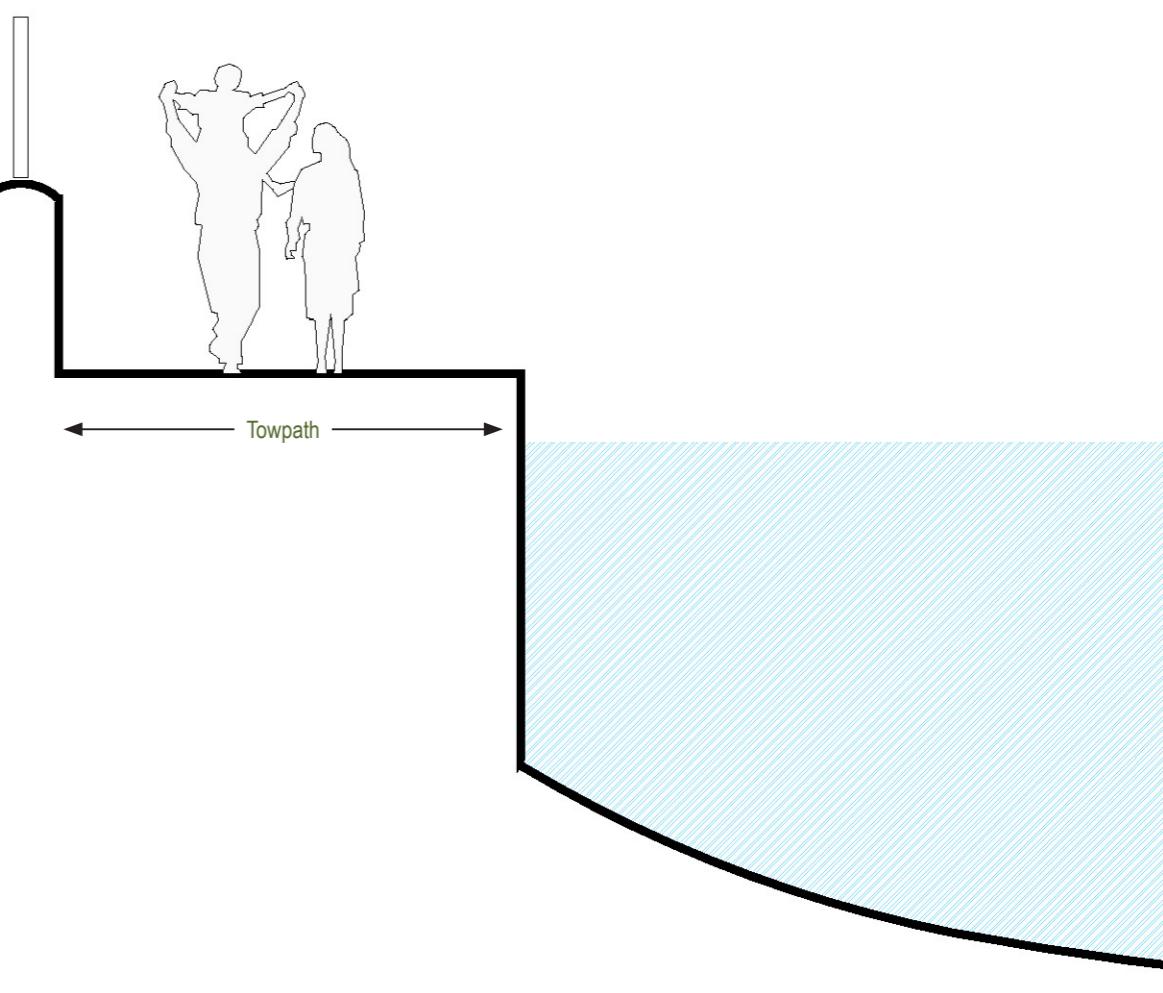
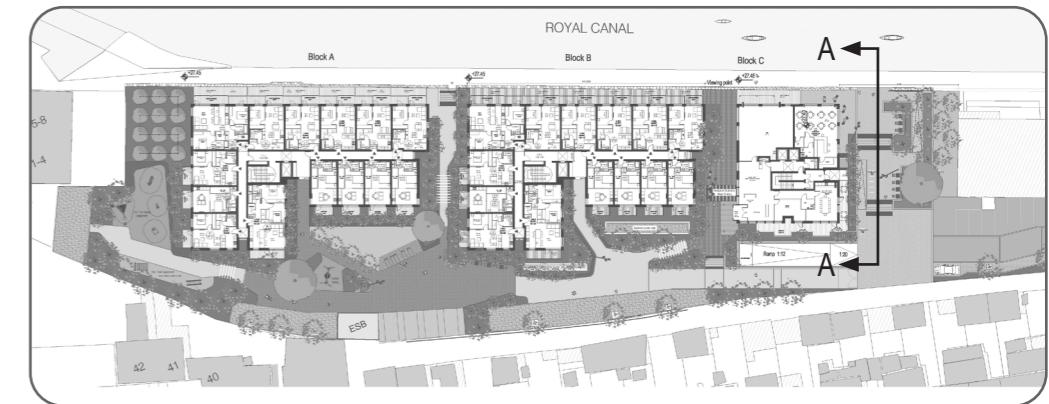
Outdoor Gym Equipment



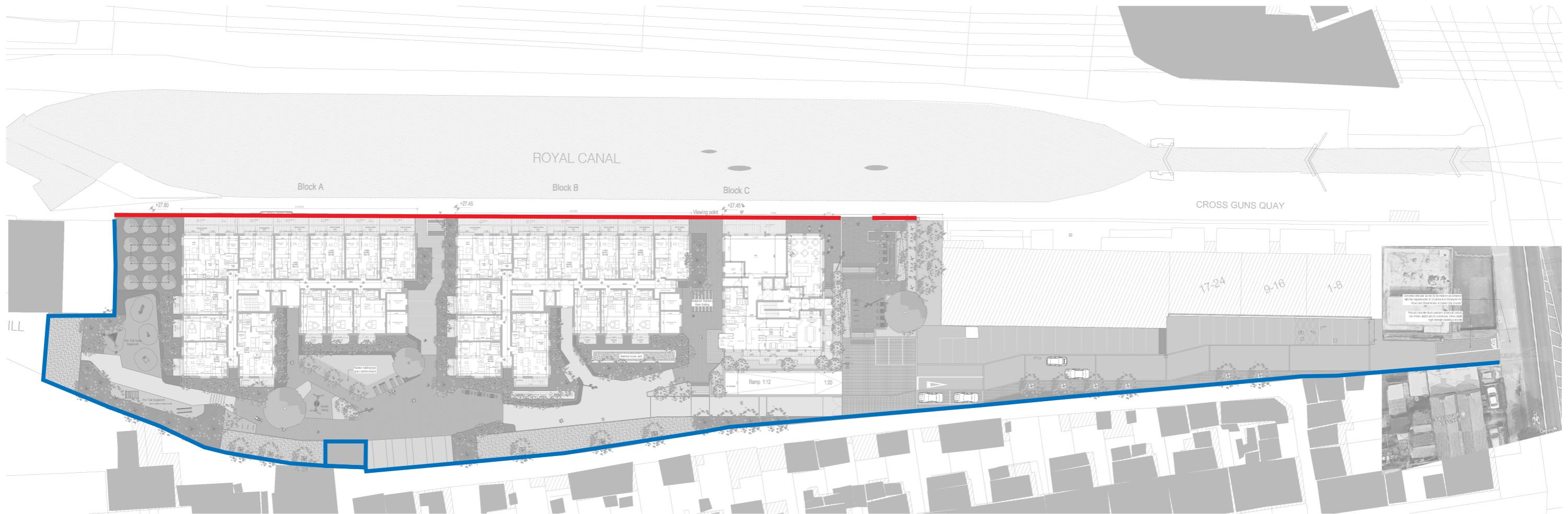
Precedent for recliner benches as proposed in Central Courtyard

#### 4. Sections





## 5. Boundary Details




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**Existing boundary treatments to be retained and subject to the following improvement works** - strip down of all vegetation, application of a bio-cide, removal of all loose masonry material and repair locally as required, level off top of wall where uneven, removal of all redundant pipework, cabling or other items, removal of any barbed wire, razor wire and supports, removal of any glass / cement haunching to top of wall.

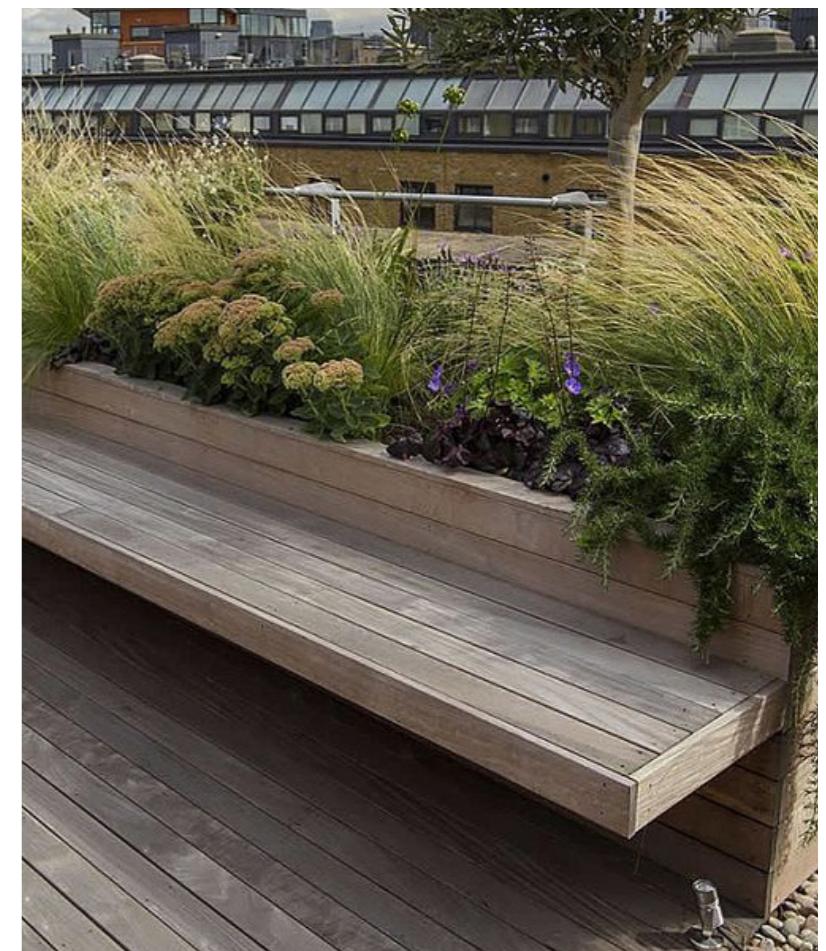
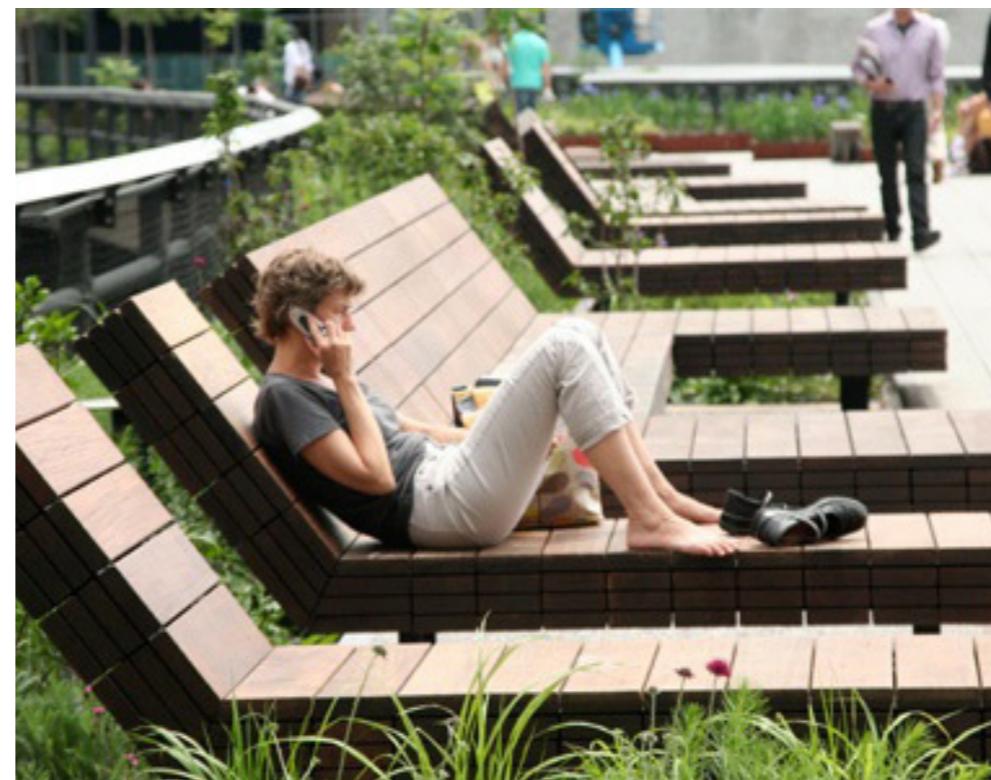
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**Boundary to OMP Detail** - refer to drawing 1723A-OMP-ZZ-ZZ-DR-A-3006

## 6. Roof Terraces

The layout of the roof terraces for Block A, B and C are designed to take advantage of each of each block's southwest facing aspects and to maximise human comfort. Composite timber decking provides the majority of the surface material, whilst raised planter beds surround the terrace with herbaceous planting mixes and small flowering trees provide shelter and visual interest.

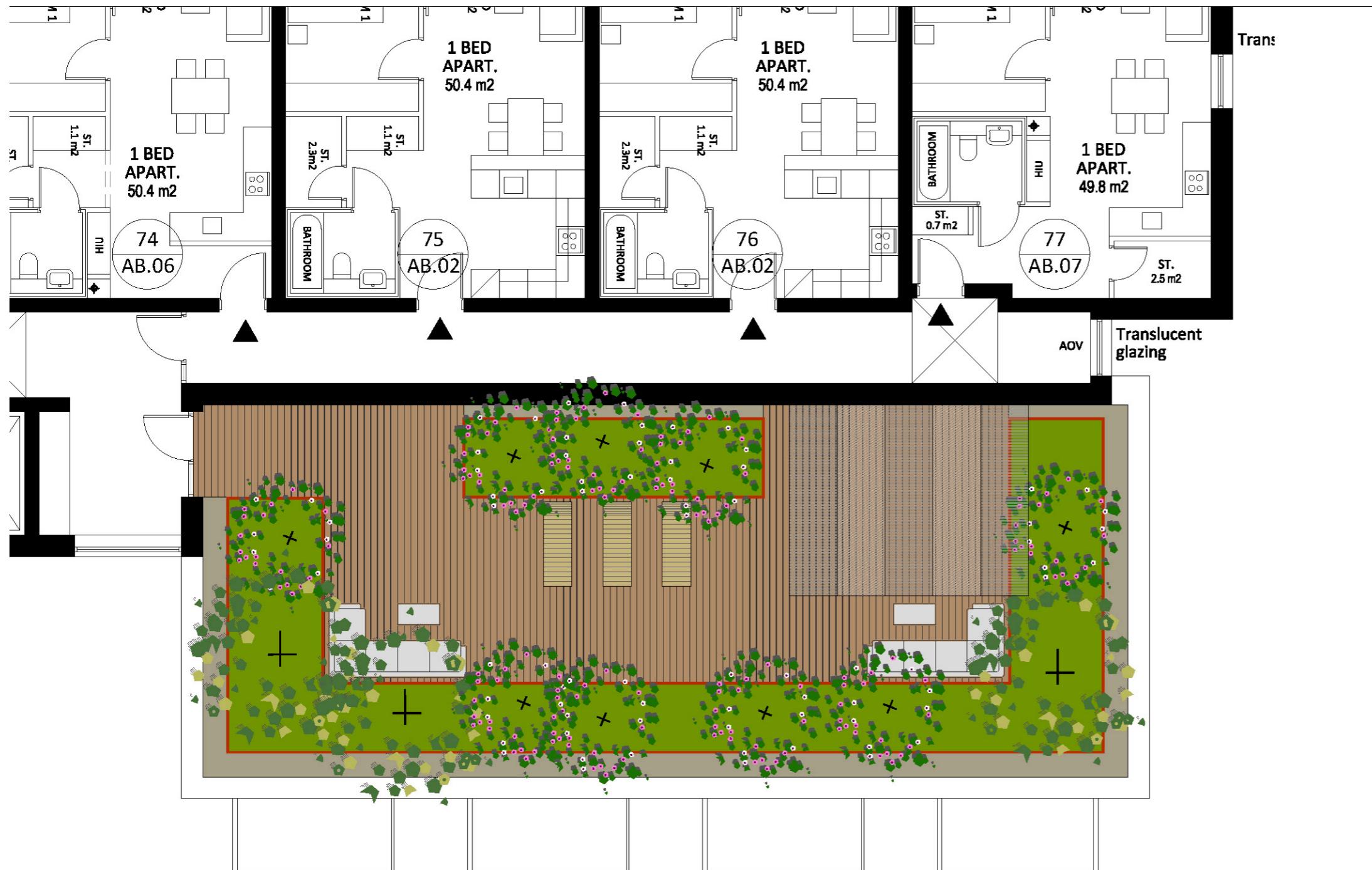
Reclined timber benches provide contemporary seating opportunities, interspersed between the raised planter boxes with powder coated aluminium edging. Timber pergola structures are located within strategic areas on each of the terraces in order to avoid overshadowing, and to provide a sheltered space for residents. They can also be adapted as outdoor kitchens.



Clockwise from top left:

- Recliner benches
- Bench seating incorporated into planter edge
- Roof terrace decking and lighting
- Roof terrace pergola structure

## Roof Terrace: Block A + B Layouts



### L E G E N D

#### H a r d L a n d s c a p e

- Composite Decking:  
Approx 176mmx30mm decking boards in charred or rustic oak finish.
- Pergola Structure, can be used as an outdoor kitchen or sheltered seating area.
- Gravel:  
10-12mm Donegal Quartzite
- Bespoke Furniture:  
Iroko hardwood clad recliner.
- Outdoor sofa set.
- Powder coated Aluminium edging to planting beds.

#### S o f t L a n d s c a p e

- 2½ to 3m. ht. multi-stem tree
- Raised Planter Beds:  
Ornamental Grasses and Herbaceous planting mix.

## Roof Terrace: Block C Layout



### L E G E N D

#### H a r d L a n d s c a p e

- Composite Decking:  
Approx 176mmx30mm decking boards in charred or rustic oak finish.
- Gravel:  
10-12mm Donegal Quartzite
- Bespoke Furniture:  
Iroko hardwood clad recliner.
- Outdoor sofa set.
- Powder coated Aluminium edging to planting beds.

#### S o f t L a n d s c a p e

- 2½ to 3m. ht. multi-stem tree
- Raised Planter Beds:  
Ornamental Grasses and Herbaceous planting mix.

## 7. Planting Schedule

### Specimen Trees

Lt	<i>Liriodendron tulipifera</i>	60-70cmg.
Pa	<i>Platanus acerifolia</i>	70-80cmg.
Qp	<i>Quercus palustris</i>	80-90cmg.

### Advanced Heavy Standard/Semi-Mature Trees

<i>Acer campestre</i>	20-25cmg.
<i>Betula pendula</i>	20-25cmg.
<i>Betula pendula 'Tristis'</i>	25-30cmg.
<i>Gleditsia triacanthos</i>	20-25cmg.
<i>Liquidambar styraciflua</i>	18-20cmg.
<i>Quercus robur</i>	18-20cmg.
<i>Robinia pseudoacacia</i>	20-25cmg.
<i>Salix alba 'Tristis'</i>	20-25cmg.
<i>Sorbus ulleungensis</i>	18-20cmg.

### Multi-stem Trees

<i>Amelanchier lamarckii</i>	3-3½ m. ht.
<i>Betula pendula</i>	3-3½ m. ht.
<i>Cercidiphyllum japonicum</i>	3-3½ m. ht.
<i>Cornus kousa 'China Girl'</i>	3-3½ m. ht.
<i>Corylus avellana</i>	3-3½ m. ht.
<i>Liquidambar styraciflua</i>	3-3½ m. ht.
<i>Magnolia kobus</i>	3-3½ m. ht.

### Shade Tolerant Groundcover Mix

<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>	
All 2ltr. cg. planted at 7 p/m².	

*Bulb Underplanting*  
*Crocus*  
*Galanthus*  
*Hyacinthoides*

### Ornamental Grass & Perennial Mix A

<i>Allium 'Christophii'</i>	
<i>Anemanthele lessoniana</i> cvs.	
<i>Calamagrostis x acutiflora 'Karl foerster'</i>	
<i>Chionochloa flavicans</i>	
<i>Echinops ritro</i> c. vars	
<i>Eryngium maritimum</i>	
<i>Knautia macedonica</i>	
<i>Libertia grandiflora</i>	
<i>Molinia caerulea</i> subsp. <i>Arundinacea</i>	
<i>Rudbeckia fulgida</i> 'Goldsturm'	
<i>Salvia nemerosa</i> c. vars	
<i>Schizostylus coccinea</i> cvs.	
<i>Sedum spectabile</i> 'Auturm Joy'	
<i>Verbena bonariensis</i>	
All 2-3 ltr.cg. planted at 300-500mm centres.	

*Tulipa 'White Triumphator'*

*Tulipa 'Negrita'*

*Tulipa 'Shirely'*

Planted as bulbs; Topsize; 12-15 p/m².

### Ornamental Grass & Perennial Mix B

<i>Anenoma 'Honorine Jobert'</i>	
<i>Aster species</i>	
<i>Campanula poscharskyana</i>	
<i>Helleborus foetidus</i>	
<i>Knautia macedonia</i>	
<i>Nepeta x faassenii</i>	
<i>Pennisetum alopecuroides</i> - Ornamental grass planted in a linear band	
<i>Salvia nemerosa</i>	
<i>Sedum telephium</i>	

### Bulb Underplanting

*Allium species*

*Crocus*

*Galanthus*

*Muscari*

All 2-3 ltr.cg. planted at 300-500mm centres unless otherwise stated.

### Roof Terrace Mix

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

### Bulb Planting

<i>Narcissus</i> var.	
<i>Hyacinthoides non-scripta</i>	
<i>Fritillaria meleagris</i>	

### Lawn

Turfgrass	
'Leinster Grass Seed Mix Grade' by Leinster Lawns Ltd.	

Laid as sod roll

### 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

## 8. Soft Landscape Materials - selected images



*Platanus acerifolia*



*Liriodendron tulipifera*



*Gleditsia triacanthos var. inermis*



*Amelanchier lamarckii*



*Salix alba 'Tristis'*



*Quercus palustris*



*Robinia pseudoacacia*



*Magnolia 'Kobus'*



*Liquidambar styraciflua multi-stem*

## 8. Soft Landscape Materials - selected images



*Allium 'Christophii'*



*Rodgersia pinnata*



*Calamagrostis x acutiflora 'Karl foerster'*



*Verbena bonariensis*



*Libertia grandiflora*



*Tulipa 'White Triumphator'*



*Schizostylus 'Fenland Daybreak'*



*Lavandula angustifolia*



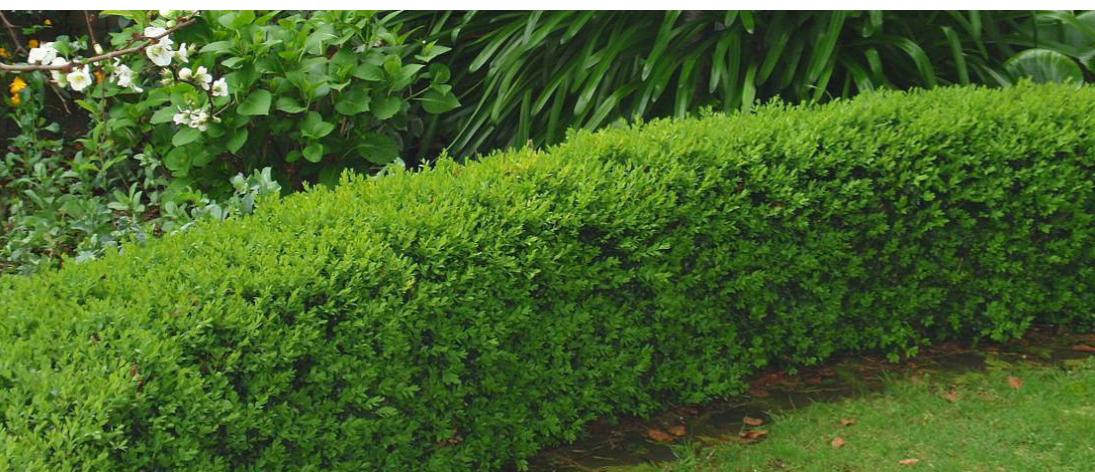
*Stipa calamagrostis*



*Carex oshimensis everlime*



*Tulbaghia violacea*



*Buxus sempervirens*



*Molinia caerulea subsp. Arundinacea*





Stainless Steel Bollard



Sheffield Standard Cycle Stand



Powder-coated Litter Bin



Hardwood bench



Feature Lighting



Pole mounted Luminaire

## 9. Site Furniture Images

## 9. Paving Type Images



190x50x60mm Block Paviour - Located between Block B and Block C



200x100x80mm Block Paviour - located in the Central Courtyard space.



Buff Asphalt



Natural Stone - Public Space Paving

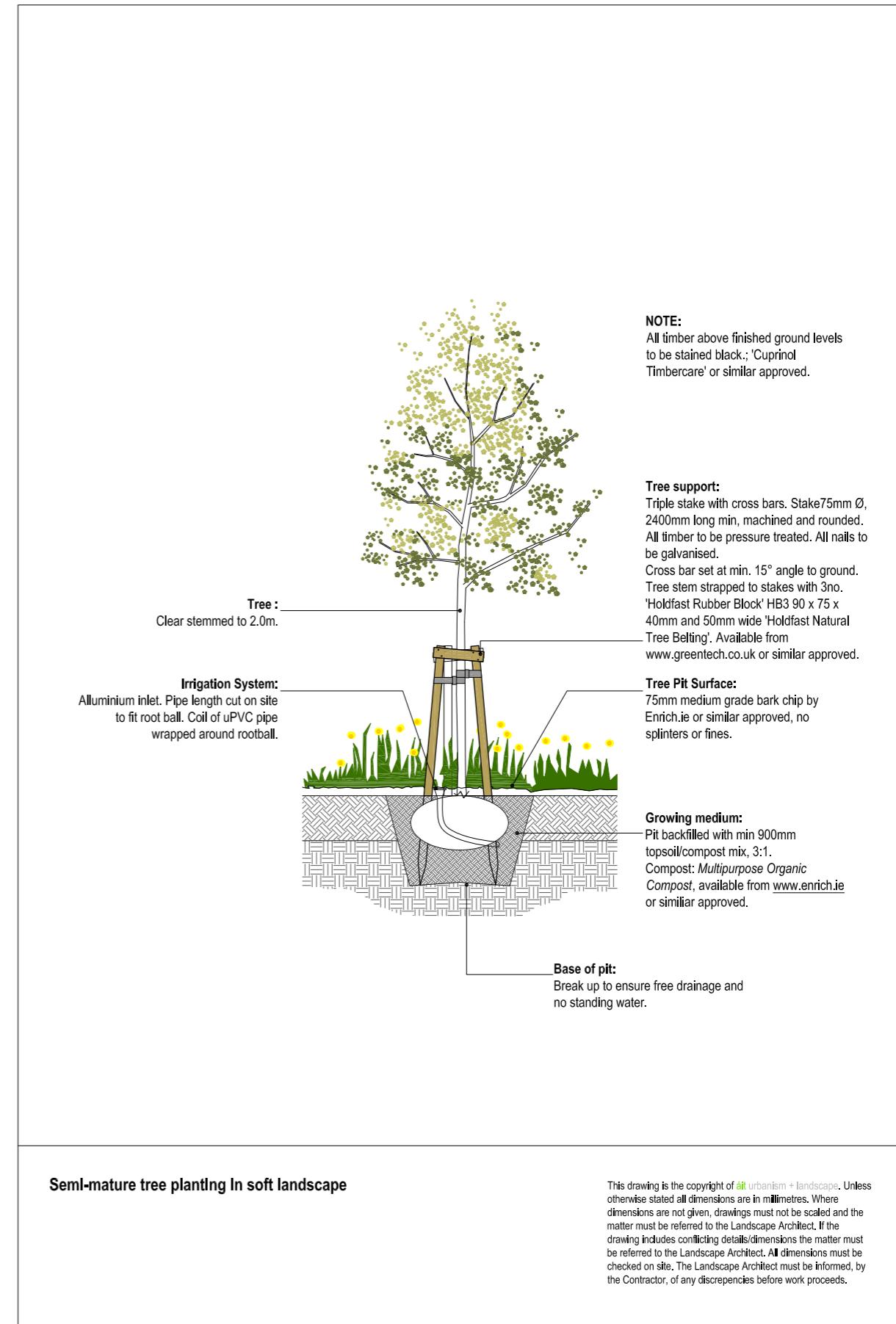
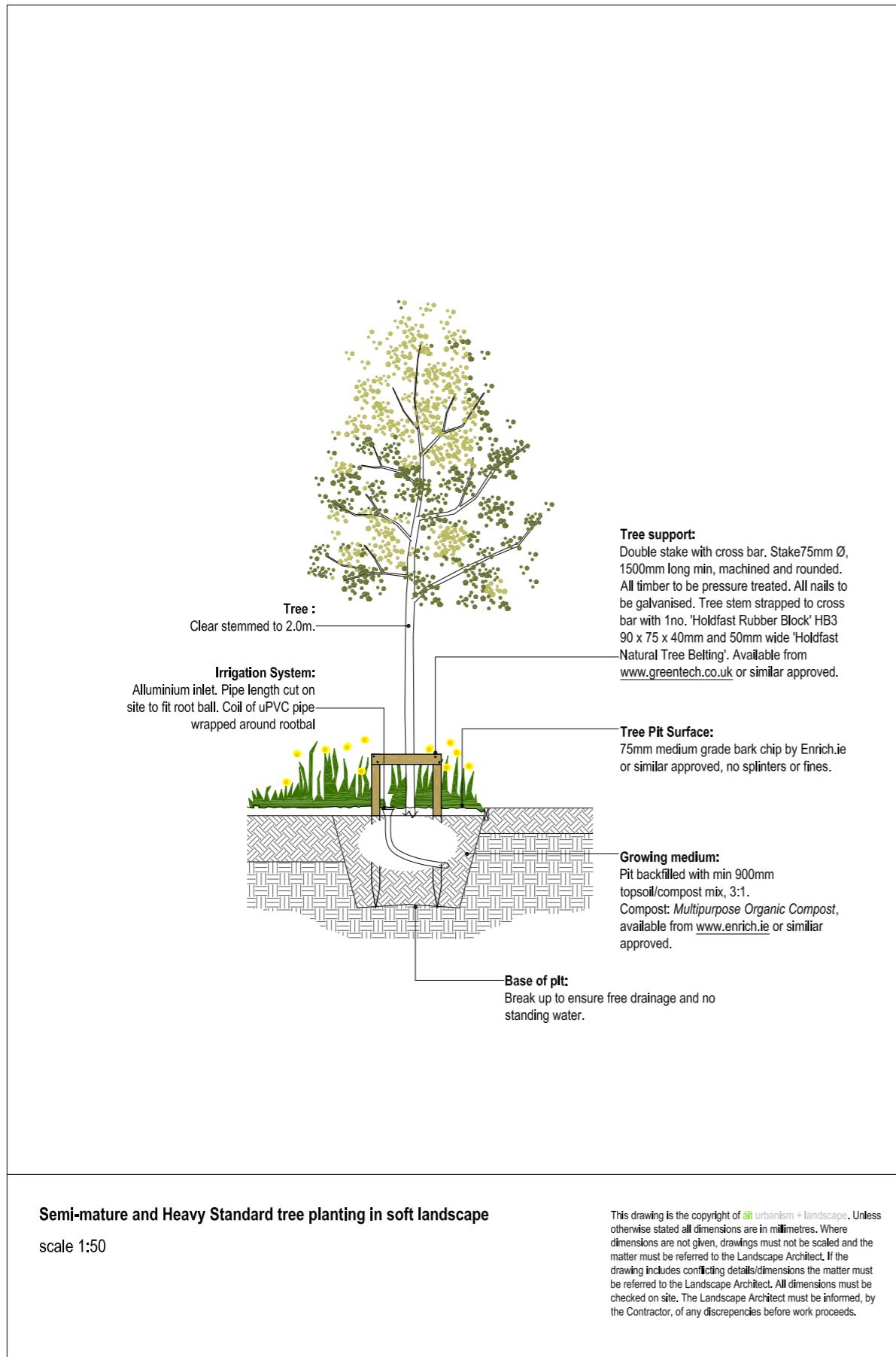


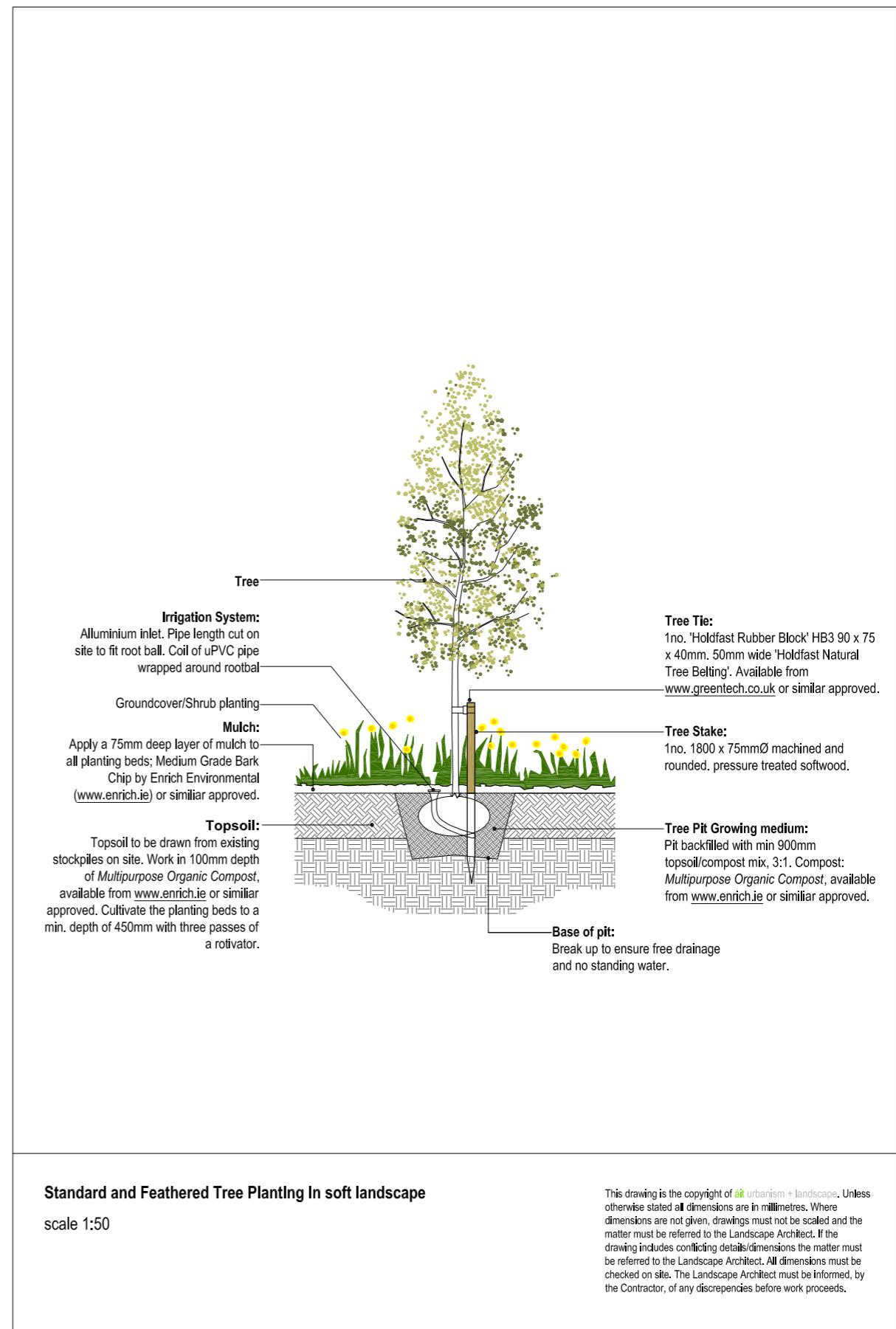
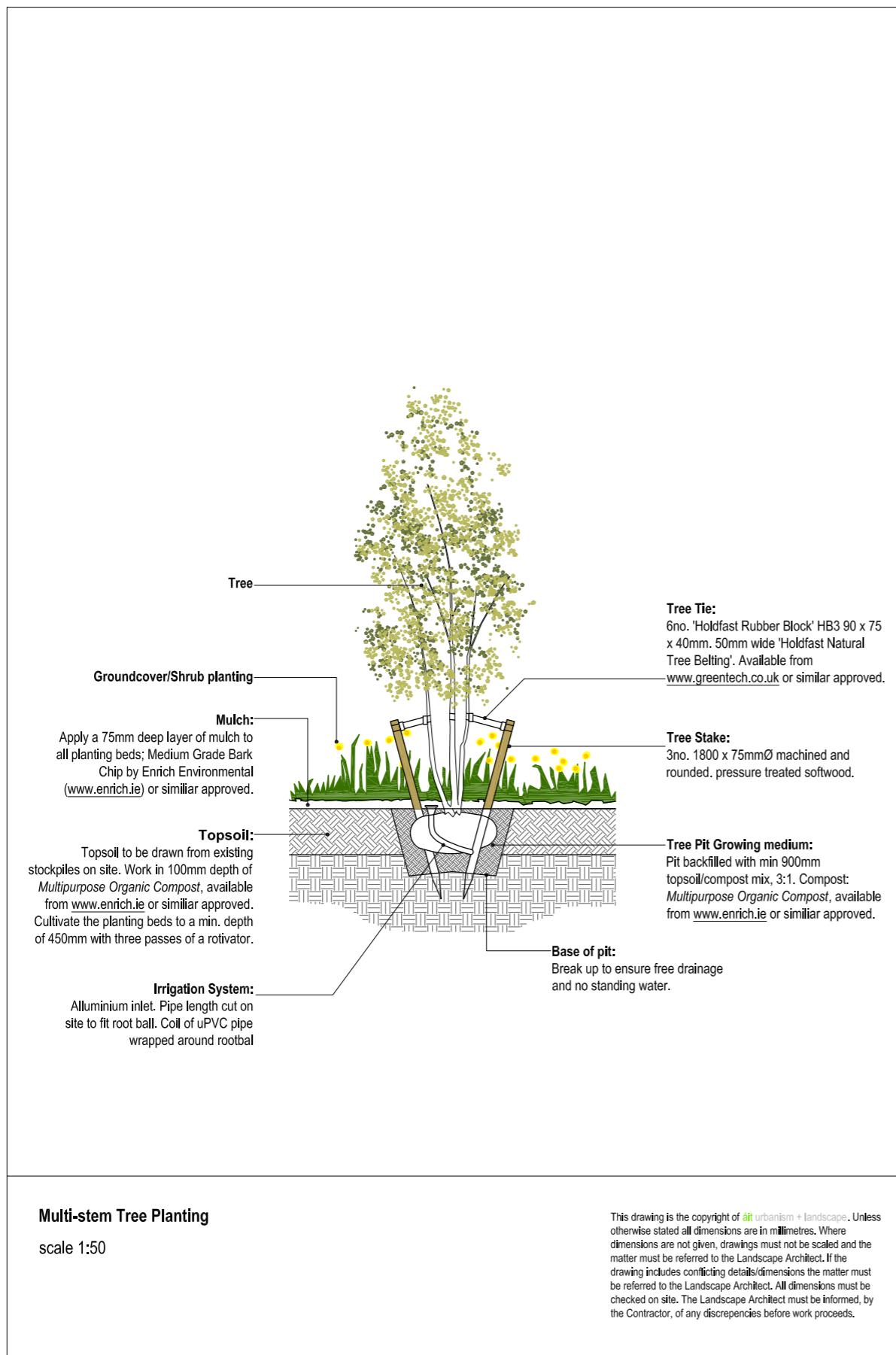
Grasscrete - parking spaces located midway along the southern site boundary

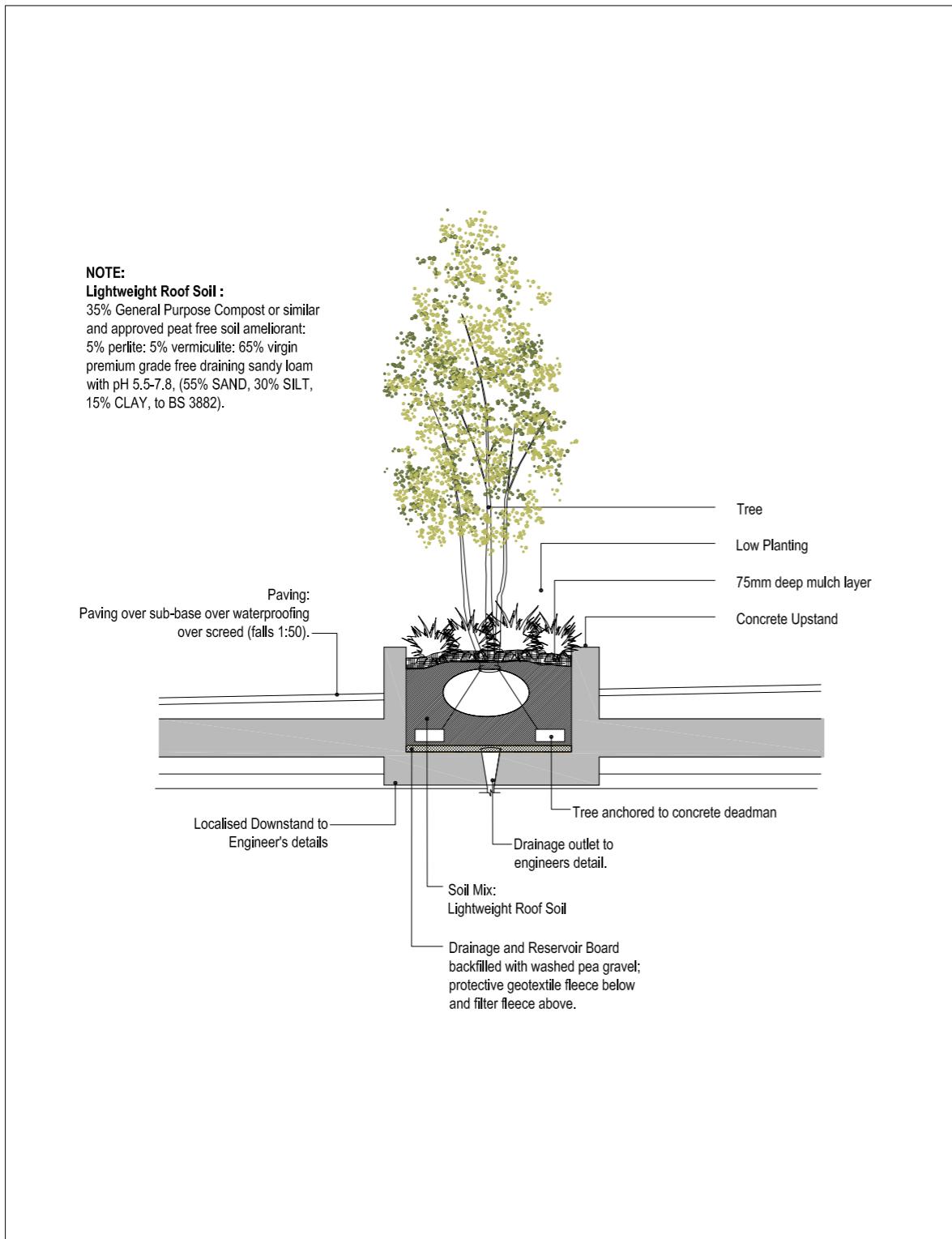


Grasspave - located between Block A and Block B

## 10. Soft Landscape Planting Details

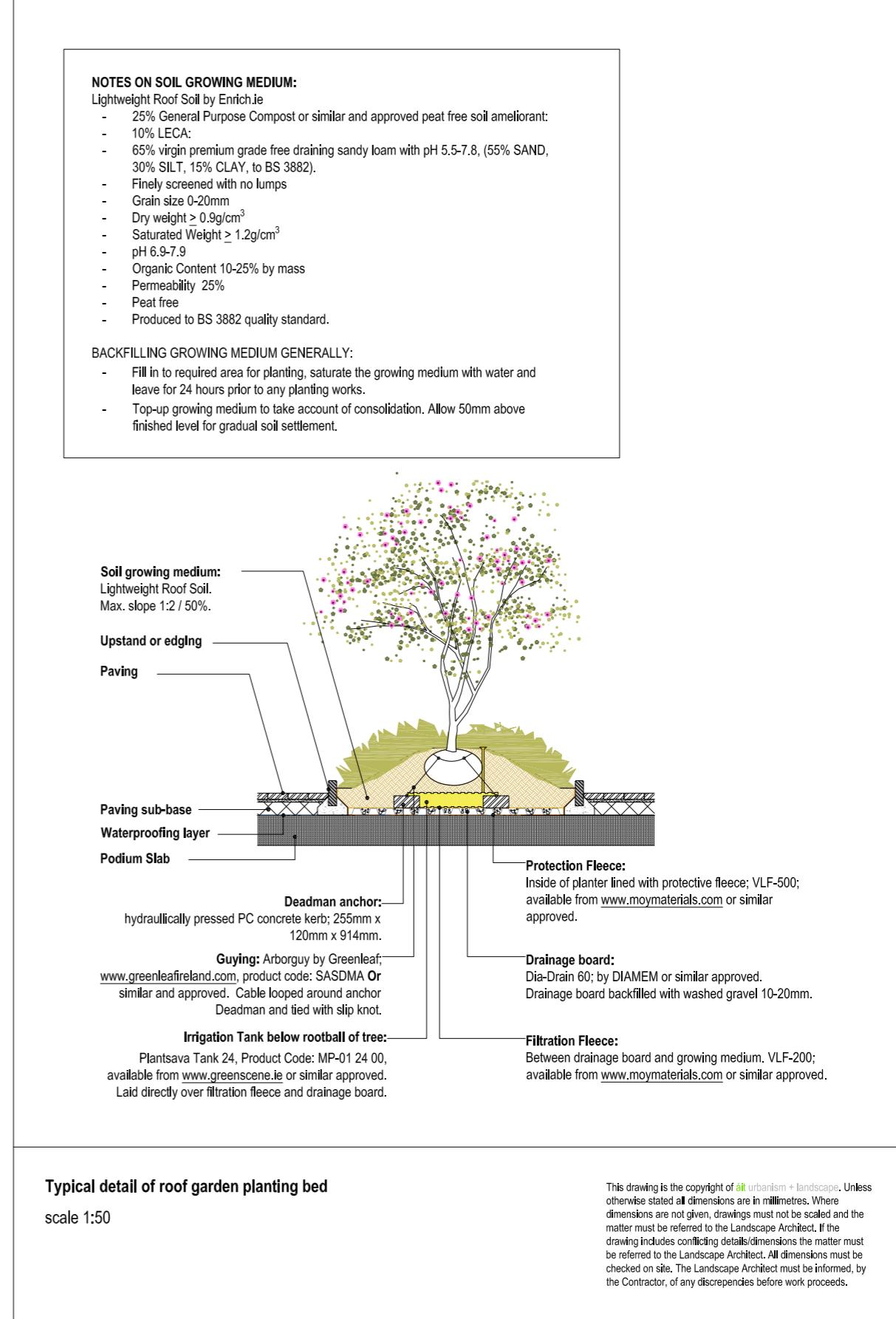


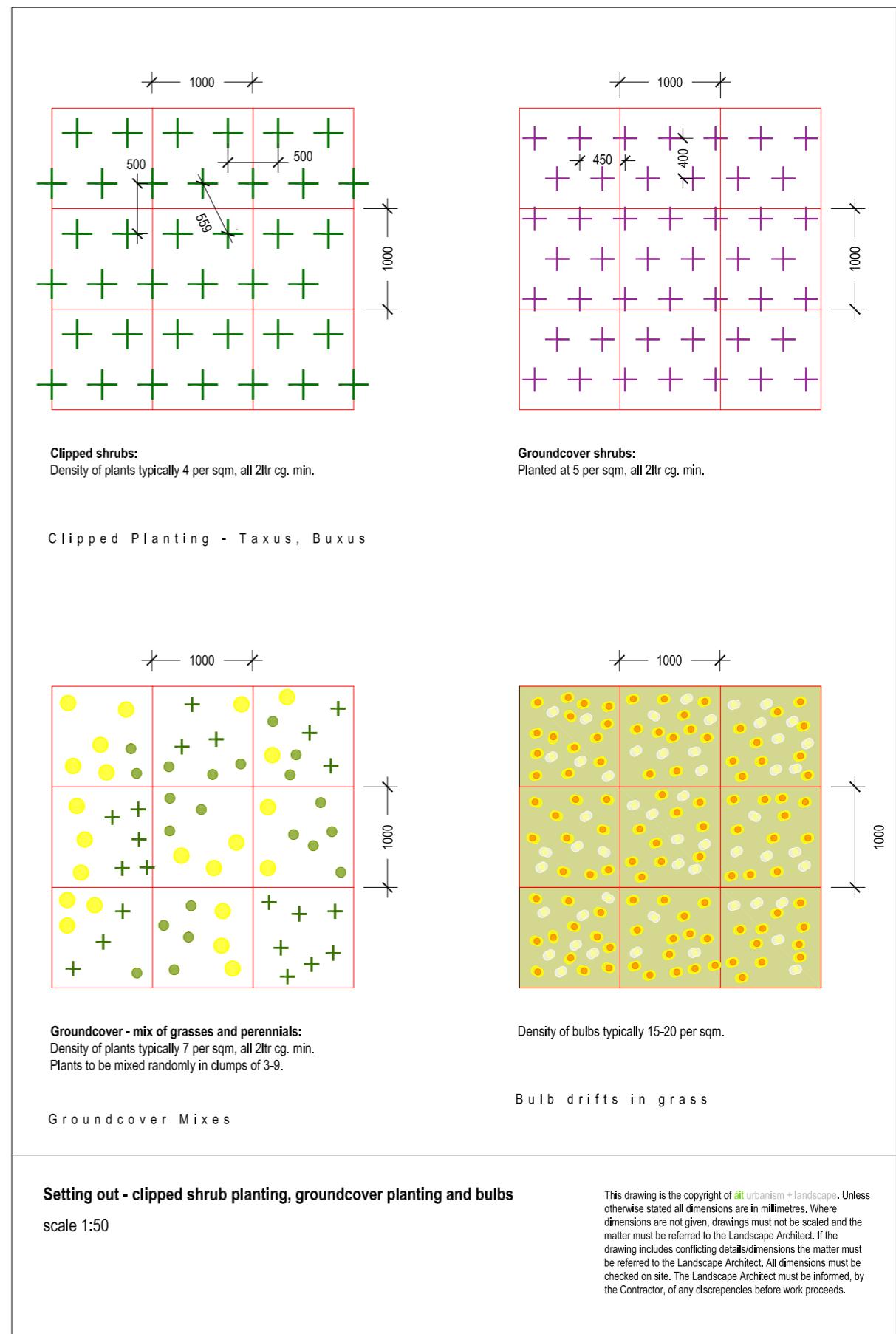
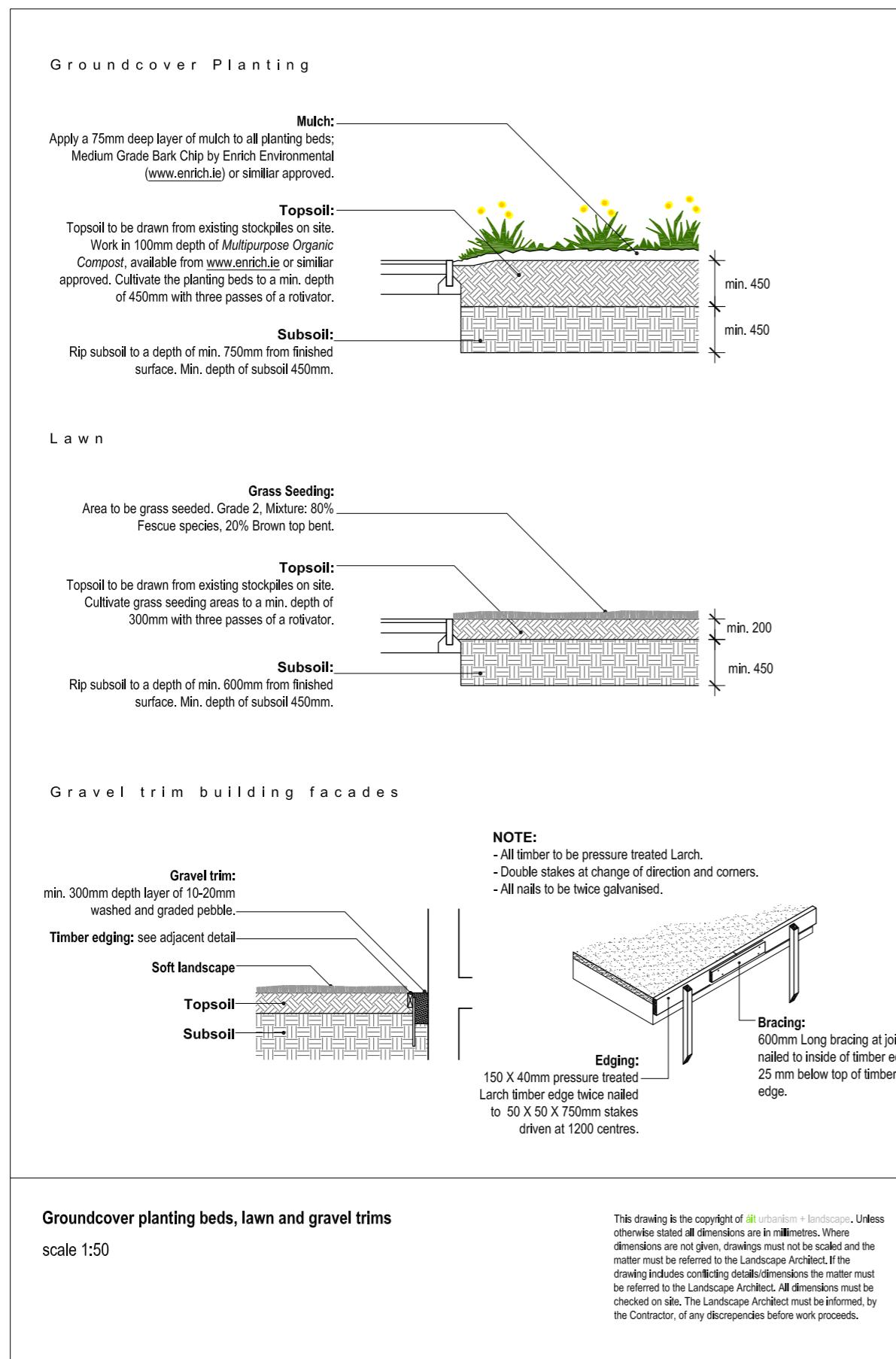




Typical detail of roof garden planting bed  
scale 1:50

This drawing is the copyright of **ait urbanism + landscape**. Unless otherwise stated all dimensions are in **millimetres**. Where dimensions are not given, drawings must not be scaled and the matter must be referred to the Landscape Architect. If the drawing includes conflicting details/dimensions the matter must be referred to the Landscape Architect. All dimensions must be checked on site. The Landscape Architect must be informed, by the Contractor, of any discrepancies before work proceeds.





## 11. Soft Landscape Specifica-

## D20 Excavating and filling

To be read with Preliminaries/General conditions

### CLEARANCE/EXCAVATING

#### 164 TREE ROOTS

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

#### 166 TREE ROOT BARRIERS

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

#### 168 SITE CLEARANCE

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

#### 170 REMOVING SMALL TREES, SHRUBS, HEDGES AND ROOTS

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

#### 175 FELLING LARGE TREES

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

#### 180 CHIPPING AND SHREDDING

- General: Not permitted.

#### 220 STRIPPING TOPSOIL

- General: Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/ roads and other areas shown on drawings.
- Depth:

- Remove to an average depth of 300 mm.
- Give notice where the depth of topsoil is difficult to determine.
- Handling: Handle topsoil for reuse or sale in accordance with clause 225.
- Around trees: Do not remove topsoil from below the spread of trees to be retained.
- Site storage: Keep separate from excavated sub-soil. Store in locations indicated on Áit drawings.

#### 221 TREATING TOPSOIL

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

#### 225 HANDLING TOPSOIL

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

#### 240 ADJACENT EXCAVATIONS

Refer to the Engineers Specifications.

#### 242 EXCAVATIONS ADJACENT TO EXISTING BACKFILLED TRENCHES

- Refer to the Engineers Specifications.

#### 244 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS

- Refer to the Engineers Specifications

#### 245 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS - CONTRACTOR'S DESIGN

- Refer to the Engineers Specifications

#### 246 EXCAVATIONS ADJACENT TO PILE SUPPORTED STRUCTURES

- Refer to the Engineers Specifications

#### 248 BACKFILL TO EXCAVATIONS LOWER THAN FOUNDATION FORMATION LEVEL

- Refer to the Engineers Specifications

#### 250 PERMISSIBLE DEVIATIONS FROM FORMATION LEVELS

- Refer to the Engineers Specifications

#### 255 ACCURACY - LINEAR DIMENSIONS

- Refer to the Engineers Specifications

### DISPOSAL OF MATERIALS

#### 410 EXCAVATED TOPSOIL STORAGE

- Storage: Stockpile in temporary storage heaps.

#### 420 TOPSOIL STORAGE HEAPS

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

- Prevent compaction and contamination.

421 TOPSOIL STORAGE HEAP TREATMENT

- Treatment: Sow with Green Manure Seed Mix, sowing rate 20g/m<sup>2</sup>.
- Seed mix: 25% *Secale cereal* (Forage Rye)  
60% *Pisum sativum subsp. arvensis* (Minerva Maple Peas)  
15% *Vicia sativa* (English Early Common Vetch)

441 SURPLUS SUBSOIL

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

450 WATER

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

454 GROUND WATER LEVEL, SPRING OR RUNNING WATER

- Give notice: If it is considered that the excavations are below the water table.
- Springs/ Running water: Give notice immediately if encountered.

457 PUMPING

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

460 PERMANENT DRAINAGE SYSTEM

- Disposal of water from the excavations through system: Not permitted.

FILLING

610 COMPACTED FILLING FOR LANDSCAPE AREAS

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

615 LOOSE TIP FILLING FOR LANDSCAPE AREAS

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

For all other filling: Refer to the Engineers Specifications

**Q28 Topsoil and growing media**

To be read with Preliminaries/ General conditions.

200 GRADING SUBSOIL

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

250 SUBSOIL SURFACE PREPARATION

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

260 INSPECTING FORMATIONS

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

310 PREPARATION OF UNDISTURBED TOPSOIL

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

320 TEMPORARY CROP ON UNDISTURBED TOPSOIL

- Treatment: Sow with Green Manure Seed Mix, sowing rate 20g/m<sup>2</sup>.
- Seed mix: 25% *Secale cereal* (Forage Rye)  
60% *Pisum sativum subsp. arvensis* (Minerva Maple Peas)  
15% *Vicia sativa* (English Early Common Vetch)
- Maintenance: In accordance with seed supplier's recommendations.

330 SURPLUS TOPSOIL TO BE RETAINED

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

335 SURPLUS TOPSOIL TO BE REMOVED

- Generally: Remove from site topsoil remaining after completion of all landscaping work.

340 IMPORTED TOPSOIL TO BS 3882

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

- 341 LOAD BEARING SOIL
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
  - Standard: n/a
  - Classification: crushed stone, sandy clay loam, peat free compost. Total pore volume > 35%. Moisture Content 12-20%. Total Nitrogen 500 mg/L, Phosphorous 300mg/L, Potassium 450 mg/L, Magnesium 200 mg/L, Calcium 3000 mg/L, Sulphur 250 mg/L. Organic content (LOL) 3-7% w/w. CBR rating: greater than 40. Bulk density; 1.3ton/cubic metre. pH value 6.5-7.9. Water permeability 1.7 x 10 m/s
  - Source: ENRICH ([www.enrich.ie](http://www.enrich.ie)) or similar approved.
  - Submit: Declaration of analysis in accordance with BS 3882, Annex E.
  - Additional analyses: Not required.
- 355 COMPOST
- Standard: In accordance with PAS 100.
  - Supplier: ENRICH ([www.enrich.ie](http://www.enrich.ie)) or similar approved.
  - Product reference: Multi Purpose Compost or similar approved.
  - Type: Sanitized and stabilized compost.
  - Horticultural parameters:
    - pH (1:5 water extract): 7.0-8.7.
    - Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.
    - Moisture content (m/m of fresh weight): 35-55%.
    - Organic matter (minimum): 25%.
    - Grading (air dried samples): 99% passing 25 mm screen, and 90% a 10 mm screen mesh aperture.
    - Carbon:Nitrogen ratio (maximum): 20:1.
  - Texture: Friable.
  - Objectionable odour: None.
  - Composting Association certification: Not required.
  - Submit: Declaration of analysis.
  - Additional analyses: Not required.
  - Samples: Supply 5 kg sample before ordering.
  - Application rate: 3:1, topsoil:compost max.
  - Timing: Apply prior to cultivation.
- 650 NOTICE OF IMPORTING TOPSOIL
- Give notice: Before stripping topsoil for transfer to site.
  - Notice period: 5 days.
- 660 SAMPLE LOAD OF IMPORTED TOPSOIL
- General: Deliver to site a sample load of not less than 0.5 m<sup>3</sup>.
  - Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
  - Notice period: 5 days.
- 670 CONTAMINATION
- General: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
    - Corrosive, explosive or flammable.
    - Hazardous to human or animal life.
    - Detrimental to healthy plant growth.
  - Subsoil: In areas to receive topsoil, do not use subsoil contaminated with the above materials.
  - Give notice: If any evidence or symptoms of soil contamination are discovered on the site, or in topsoil to be imported.
- 680 TOPSOIL STORAGE HEAPS
- Location: as per Temporary Compound drawings.
  - Height (maximum): 2.0 m.
  - Width (maximum): 2.0 m.
  - Protection:
    - Do not place any other material on top of storage heaps.
    - Do not allow construction plant to pass over storage heaps.
    - Prevent compaction and contamination, by fencing and covering as appropriate.
- 685 TEMPORARY CROP ON TOPSOIL STORAGE HEAPS
- 690 HANDLING TOPSOIL
- Aggressive weeds: Give notice and obtain instructions before moving topsoil.
  - Plant: Select and use plant to minimize disturbance, trafficking and compaction.
  - Contamination: Do not mix topsoil with:
    - Subsoil, stone, hardcore, rubbish or material from demolition work.
    - Other grades of topsoil.
  - Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.
  - Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 3%, to BS 1377-2.
- 700 SPREADING TOPSOIL
- Temporary roads/surfacing: Remove before spreading topsoil.
  - Layers:
    - Depth (maximum): 150 mm.
    - Gently firm each layer before spreading the next.
  - Depths after firming and settlement (minimum): as per Áit details and drawings.
  - Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.
- 710 LOOSE TIPPING OF TOPSOIL
- General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.
  - Depths after settlement (minimum): as per Áit details and drawings.
- 910 FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT
- Above adjoining paving or kerbs: 25 mm.
  - Below dpc of adjoining buildings: Not less than 150 mm.
  - Shrub areas: Higher than adjoining grass areas by 75 mm.
  - Within root spread of existing trees: Unchanged.
  - Adjoining soil areas: Marry in.
  - Thickness of turf or mulch: Included.

**Q30 Seeding/turfing**

To be read with Preliminaries/General conditions.

**GENERAL INFORMATION/REQUIREMENTS**

**115 SEEDED AND TURFED AREAS**

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

**120 CLIMATIC CONDITIONS**

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

**145 WATERING**

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

**146 WATERING**

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

**150 WATER RESTRICTIONS**

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

**160 NOTICE**

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

**170 SETTING OUT**

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

**PREPARATION**

**210 HERBICIDE FOR ALL GRASSED AREAS**

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

**212 SEED BED CLEANING BEFORE SOWING ALL GRASSED AREAS**

- Operations: As seed supplier's recommendations..

**222 SOIL AMELIORANT/CONDITIONERFOR ALL GRASSED AREAS**

- Type: n/a.
- Reference/ Description/ Grading: n/a.
- Samples: n/a.
- Application rate: n/a.
- Timing: Apply prior to cultivation.

**250 CULTIVATION**

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer: n/a
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
  - Depth: 150 mm.
  - Particle size (maximum): 10 mm.
- Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

**260 GRADING**

- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
  - Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150 mm .
- Give notice: If required levels cannot be achieved by movement of existing soil.

**270 FERTILIZERFOR ALL GRASSED AREAS**

- Types: n/a
- Application: n/a
- Coverage: n/a

**275 FERTILIZERFOR ALL GRASSED AREAS**

- Type: n/a.
- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Application: Before final cultivation and three to five days before seeding/ turfing.
  - Rate: Spread evenly at 70 g/m<sup>2</sup>.

**280 FINAL CULTIVATION**

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
  - Depth: 25 mm.
  - Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
  - Remove surface stones/earth clods exceeding:
    - General areas: 20 mm.
    - Fine lawn areas: 10 mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

**290 PREPARATION FOR HYDRAULIC SEEDING**

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

	<b>SEEDING</b>	
310	GRASS SEED FOR ALL GRASSED AREAS <ul style="list-style-type: none"> <li>Mixture: 80% Fescue species, 20% Brown top bent.</li> <li>Application rate: 45 g/m<sup>2</sup>.</li> </ul>	• Herbicide treatment: Apply not less than four weeks and not more than three months before lifting.
311	MEADOW SEED MIX FOR ALL MEADOW AREAS <ul style="list-style-type: none"> <li>Mixture: wildflower/ grass seed mix 20/80. Wildflower mix; EC 10 available from <a href="http://www.wildflowers.ie">www.wildflowers.ie</a>, grass; Bent/Fescue</li> <li>Application rate: 5 g/m<sup>2</sup>.</li> </ul>	420 DELIVERY AND STORAGE <ul style="list-style-type: none"> <li>Timing: Lay turf within 24 hours of delivery to site.</li> <li>Frosty weather or waterlogged ground: Do not lift turf.</li> <li>Delivery: Arrange to avoid need for excessive stacking.</li> <li>Stacking height (maximum): 1 m.</li> <li>Dried out or deteriorated turf: Do not use.</li> </ul>
319	QUALITY OF SEED FOR ALL GRASSED AREAS <ul style="list-style-type: none"> <li>Freshness: Produced for the current growing season.</li> <li>Certification: Blue label certified varieties. <ul style="list-style-type: none"> <li>Standard: EC purity and germination regulations.</li> <li>Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.</li> </ul> </li> <li>Samples of mixtures: Submit when requested.</li> </ul>	423 INSPECTION OF TURF <ul style="list-style-type: none"> <li>Give notice: Before lifting turf for all grassed areas.</li> </ul>
330	SOWING <ul style="list-style-type: none"> <li>General: Establish good seed contact with the root zone.</li> <li>Method: To suit soil type, proposed usage, location and weather conditions during and after sowing. <ul style="list-style-type: none"> <li>Distribution: 2 equal sowings at right angles to each other.</li> </ul> </li> </ul>	428 COMPOST DRESSING FOR TURF <ul style="list-style-type: none"> <li>Type: Sanitized and stabilized compost.</li> <li>Supplier: ENRICH (<a href="http://www.enrich.ie">www.enrich.ie</a>) or similar approved.</li> <li>Product reference: Multi Purpose Compost or similar approved.</li> <li>Standard: To PAS 100.</li> <li>Horticultural parameters: <ul style="list-style-type: none"> <li>pH (1:5 water extract): 7.0-8.7.</li> <li>Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.</li> <li>Moisture content (m/m of fresh weight): 35-55%.</li> <li>Organic matter content (minimum): 25%.</li> <li>Grading (air dried samples): 100% passing screen mesh aperture of n/a.</li> <li>Carbon:Nitrogen ratio (maximum): 20:1.</li> </ul> </li> <li>Texture: Friable.</li> <li>Objectable odour: None.</li> <li>Composting Association certification: Not required.</li> <li>Declaration of analysis: Submit.</li> <li>Additional analyses: Not required.</li> <li>Samples: Supply 5 kg sample before ordering.</li> <li>Application rate: n/a.</li> <li>Timing: Apply prior to cultivation.</li> </ul>
335	GRASS SOWING SEASON <ul style="list-style-type: none"> <li>Grass seed generally: April to June or August to October.</li> </ul>	429 DRESSING FOR TURF <ul style="list-style-type: none"> <li>Type: Sandy loam.</li> <li>Supplier: n/a.</li> <li>Product reference: n/a.</li> <li>Additional analyses: Not required.</li> <li>Samples: Supply 5 kg sample before ordering.</li> <li>Application rate: n/a.</li> <li>Timing: Apply prior to cultivation.</li> </ul>
336	WILDFLOWER SOWING SEASON <ul style="list-style-type: none"> <li>Wildflower seed generally: March to May or August to October.</li> </ul>	430 TURFING GENERALLY <ul style="list-style-type: none"> <li>Time of year: April-September, unless otherwise instructed..</li> <li>Timing of laying: <ul style="list-style-type: none"> <li>Spring and summer: Within 18 hours of delivery.</li> <li>Autumn and winter: Within 24 hours of delivery.</li> </ul> </li> <li>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.</li> <li>Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.</li> <li>Jointing: Laid with broken joints, well butted up. Do not stretch turf.</li> <li>Edges: Whole turfs, trimmed to a true line.</li> <li>Adjusting levels: Remove high spots and fill hollows with fine soil.</li> <li>Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.</li> <li>Dressing, brushed well in to completely fill all joints: 35% Finely sifted topsoil, 35% Compost, 30% Sand .</li> <li>Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.</li> </ul>
340	PRE-EMERGENT HERBICIDEFOR ALL GRASSED AREAS <ul style="list-style-type: none"> <li>Standard: Pesticide Safety Directorate approved.</li> <li>Application rate: In accordance with manufacturer's written recommendation.</li> <li>Timing: Immediately after sowing.</li> </ul>	
350	TURF EDGING TO SEEDED AREAS <ul style="list-style-type: none"> <li>Standard: To BS 3969, with no perennial ryegrass.</li> <li>Seed mix: Similar to seeded area.</li> <li>Timing: Before sowing.</li> <li>Preparation: Rake back a 750 mm wide margin around prepared seed beds.</li> <li>Level of seed bed: Married in with turf.</li> <li>Placement: Single row laid end to end and trimmed to a line.</li> <li>Watering: On completion.</li> </ul>	
352	EDGES TO SEEDED AREAS ADJACENT TO PLANTING BEDS AND TREE PITS <ul style="list-style-type: none"> <li>Timing: After seeded areas are well established.</li> <li>Edges: Clean straight lines or smooth curves.</li> <li>Mulch and soil: Draw back to permit edging.</li> <li>Arisings: Remove.</li> <li>Completion: Respread soil and mulch.</li> <li>Grass cover: n/a.</li> </ul>	
405	CULTIVATED TURF FOR ALL GRASSED AREAS <ul style="list-style-type: none"> <li>Supplier: n/a</li> <li>Seed mixture: 80% Fescue species, 20% Brown top bent.</li> <li>Properties of soil used for turf production: Well drained sandy loam.</li> </ul>	
410	TURF TO BS 3969 FOR ALL GRASSED AREAS <ul style="list-style-type: none"> <li>Standard: To BS 3969, free from undesirable grasses and weeds.</li> <li>Grade: General purpose utility turf with no perennial ryegrass.</li> <li>Source: Submit proposals.</li> </ul>	

440	TURFING ON BANKS EXCEEDING 30° SLOPE	<ul style="list-style-type: none"> <li>Turf configuration: Diagonal or horizontal.</li> <li>Securing turfs:           <ul style="list-style-type: none"> <li>- Fixings: Galvanized wire pins, bent or hairpin pattern, 200 mm long x 4 mm diameter or Pointed softwood pegs, 200 mm long x 25 mm square.</li> <li>- Frequency of fixings: Each turf.</li> </ul> </li> <li>Removal of fixings: When instructed. Make good any damage to grass until area is accepted.</li> </ul>	<ul style="list-style-type: none"> <li>General: Leave the works in a clean, tidy condition at Completion and after any maintenance operations.</li> </ul>
445	TURF NETTING	<ul style="list-style-type: none"> <li>Turf configuration: Diagonal or horizontal.</li> <li>Turf netting:           <ul style="list-style-type: none"> <li>- Jute mesh;</li> <li>- Plastics or nylon mesh; or</li> <li>- Wire netting to BS EN 10223-2, 20 mm mesh size, 0.7 mm wire diameter, zinc coated.</li> </ul> </li> <li>Fixings for netting: Galvanized wire pins, bent or hairpin pattern, 200 mm long x 4 mm diameter or Pointed softwood pegs, 200 mm long x 25 mm square.</li> <li>- Frequency of fixings: 6 per m<sup>2</sup> or 8 per m<sup>2</sup>.</li> <li>Removal of mesh and fixings: When instructed. Make good any damage to grass until area is accepted.</li> </ul>	<b>MAINTENANCE</b>
450	TRIMMING TURF	<ul style="list-style-type: none"> <li>Newly planted tree pits: Neatly cut away around individual trees.           <ul style="list-style-type: none"> <li>- Diameter: min. 1.0 metre.</li> <li>- Tree pit surface: Respread existing mulch.</li> </ul> </li> </ul>	<b>FAILURES OF SEEDING/TURFING</b> <ul style="list-style-type: none"> <li>Defective materials or workmanship: Areas that have failed to thrive.           <ul style="list-style-type: none"> <li>- Exclusions: Theft or malicious damage.</li> </ul> </li> <li>Method of making good: Recultivation and reseeding/ returfing.</li> <li>Timing of making good: The next suitable planting season.</li> </ul>
510	PROTECTIVE FENCING	<ul style="list-style-type: none"> <li>Fencing type: As section Q40.</li> <li>- Height: min. 1100mm</li> <li>Erection: On completion of seeding/ turfing.</li> <li>Removal: After grass is well established. Fencing will remain the property of the Contractor.</li> </ul>	<b>MAINTAINING GENERAL GRASSED AREAS</b> <ul style="list-style-type: none"> <li>Maximum height of growth at any time: 75 mm.</li> <li>Preparation: Before each cut remove all litter and debris.</li> <li>Cutting: As and when necessary to a height of 50 mm.           <ul style="list-style-type: none"> <li>- Arisings: Remove.</li> </ul> </li> <li>Bulb planting areas: Do not cut until bulb foliage has died down.</li> <li>Trimming: All edges.           <ul style="list-style-type: none"> <li>- Arisings: Remove.</li> </ul> </li> <li>Weed control: Substantially free of broad leaved weeds.           <ul style="list-style-type: none"> <li>- Method: Application of a suitable selective herbicide.</li> </ul> </li> <li>Stones brought to the surface: Remove regularly.           <ul style="list-style-type: none"> <li>- Size: Exceeding 25 mm in any dimension.</li> </ul> </li> <li>Areas of settlement: Make good.</li> <li>Watering: When instructed.</li> </ul>
530	FIRST CUT OF GRASSED AREAS	<ul style="list-style-type: none"> <li>Timing: When grass is reasonably dry.</li> <li>- Height of initial growth: 40-75 mm.</li> <li>Preparation:           <ul style="list-style-type: none"> <li>- Debris and litter: Remove.</li> <li>- Stones and earth clods larger than 25 mm in any dimension: Remove</li> </ul> </li> <li>Height of first cut: 40 mm.</li> <li>Mower type: Cylinder.</li> <li>Arisings: As schedule.</li> </ul>	<b>MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS</b> <ul style="list-style-type: none"> <li>Preparation: Before each cut remove all litter and debris.</li> <li>Height and frequency of cut in first growing season:           <ul style="list-style-type: none"> <li>- Time of first cut: March/ April OR June/July.</li> <li>- Height of first cut: 75 mm.</li> <li>- Frequency of subsequent cutting (minimum): Every 6-8 weeks until autumn.</li> <li>- Height of growth permitted (maximum): 100 mm.</li> </ul> </li> <li>Height and frequency of cut in second growing season:           <ul style="list-style-type: none"> <li>- Time of cut: Single cut in October.</li> <li>- Height of cut: 75 mm.</li> <li>Trimming: All edges.           <ul style="list-style-type: none"> <li>- Arisings: Remove.</li> </ul> </li> <li>Watering: When instructed.</li> </ul> </li> </ul>
540	FIRST CUT OF ALL GRASSED AREAS	<ul style="list-style-type: none"> <li>Height of initial growth: As schedule.</li> <li>Preparation:           <ul style="list-style-type: none"> <li>- Debris and litter: Remove.</li> <li>- Stones and earth clods larger than 25 mm in any dimension: Remove</li> </ul> </li> <li>Height of first cut: As schedule.</li> <li>Mower type: As schedule.</li> <li>Arisings: As schedule.</li> </ul>	<b>MAINTAINING GRASSED AREAS WITH ANNUAL WILD FLOWERS</b> <ul style="list-style-type: none"> <li>Preparation: Before each cut remove all litter and debris.</li> <li>Timing of first cut: After flowers have set seed..</li> <li>Height of first cut: n/a.</li> <li>Subsequent cutting: As necessary, so the height of growth does not exceed n/a.           <ul style="list-style-type: none"> <li>- Height of cut: n/a.</li> </ul> </li> <li>Trimming: All edges.           <ul style="list-style-type: none"> <li>- Arisings: Remove.</li> </ul> </li> <li>Watering: When instructed.</li> </ul>
550	AREAS NOT TO BE CUT	<ul style="list-style-type: none"> <li>Do not cut:</li> <li>n/a.</li> </ul>	<b>MAINTENANCE FERTILIZERFOR ALL GRASSED AREAS EXCEPT WILDFLOWER MEADOWS</b> <ul style="list-style-type: none"> <li>March application: 15:10:10 Spring turf fertilizer at 35 g/m<sup>2</sup>.</li> <li>September application: 5:10:10 Autumn turf fertilizer at 50 g/m<sup>2</sup>.</li> </ul>
590	CLEANLINESS	<ul style="list-style-type: none"> <li>Soil and arisings: Remove from hard surfaces.</li> </ul>	

### Q31 External planting

To be read with Preliminaries/General conditions.

#### GENERAL INFORMATION/ REQUIREMENTS

##### 112 SITE CLEARANCE GENERALLY

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

##### 118 SOIL CONDITIONS

- Soil for cultivating and planting: Moist, friable and (excepting aquatic/ marginal planting) not waterlogged.
- Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

##### 120 CLIMATIC CONDITIONS

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

##### 125 TIMES OF YEAR FOR PLANTING

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

##### 130 MECHANICAL TOOLS

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

##### 145 WATERING

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

##### 150 WATER RESTRICTIONS

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

##### 160 NOTICE

- Give notice before:
- Setting out.
- Applying herbicide.
- Applying fertilizer.
- Delivery of plants/ trees.
- Planting shrubs.
- Planting trees into previously dug pits.
- Watering.

- Visiting site during maintenance period.
- Period of notice: 3 working days.

##### 165 PREPARATION, PLANTING AND MULCHING MATERIALS

- General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

##### 200 PLANTS/ TREES - GENERAL

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discolouration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
- Standard: The relevant parts of BS 3936.
- Species: True to name.
- Origin/ Provenance: As plant schedule.

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

##### 215 PLANTS/ TREES - SPECIFICATION CRITERIA

- Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification.

##### 225 BULBS/ CORMS/ TUBERS

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

##### 235 CONTAINER GROWN PLANTS/ TREES

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

##### 245 LABELLING AND INFORMATION

- General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
  - Full botanical name.
  - Total number.
  - Number of bundles.
  - Part bundles.
  - Supplier's name.
  - Employer's name and project reference.
  - Plant specification, in accordance with scheduled National Plant Specification categories.
  - Additional information: Submit on request:
    - Country of origin;
    - Date supplied and consignment details or reference;
    - Impact of pest/ disease;
    - Name or designation of rootstock of budded or grafted plants;
    - Potting dates;
    - Propagation method and dates;
    - Pruning dates; and
    - Type of container.

##### 246 LABELLING AND INFORMATION

	<ul style="list-style-type: none"> <li>Standard: To BS 3936.</li> </ul>		
255	PLANTS/ TREES RESERVED AT SUPPLIER'S PREMISES	<ul style="list-style-type: none"> <li>Types/ Species: As plant schedule.</li> <li>Predelivery inspection: Give notice.</li> <li>Labelling: Identify inspected plants/ trees as reserved for use on this project.</li> </ul>	<ul style="list-style-type: none"> <li>Product reference: submit proposals for landscape architects approval.</li> <li>Application: Spread evenly.</li> <li>Timing: Immediately before cultivation.</li> <li>Rate: 120g/m<sup>2</sup>.</li> </ul>
260	PLANT/ TREE SUBSTITUTION	<ul style="list-style-type: none"> <li>Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering:</li> </ul> <p>Submit alternatives, stating:</p> <ul style="list-style-type: none"> <li>Price.</li> <li>Difference from specified plants/ trees.</li> <li>Approval: Obtain before making any substitution.</li> </ul>	<p>341 PEAT</p> <ul style="list-style-type: none"> <li>Peat or products containing peat: Do not use.</li> </ul>
265	PLANT HANDLING, STORAGE TRANSPORT AND PLANTING	<ul style="list-style-type: none"> <li>Standard: To HTA 'Handling and establishing landscape plants'.</li> <li>Frost: Protect plants from frost.</li> <li>Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.</li> <li>Plant packaging: n/a.</li> <li>Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped.</li> <li>Planting: Upright or well balanced with best side to front.</li> </ul>	<p>361 COMPOSTFOR ALL PLANTED AREAS</p> <ul style="list-style-type: none"> <li>Locations: All planting areas.</li> <li>Type: Sanitized and stabilized compost.</li> <li>Manufacturer/ Supplier: Enrich (<a href="http://www.enrich.ie">www.enrich.ie</a>)</li> <li>Product reference: Multi Purpose Compost</li> <li>Standard: To PAS 100.</li> <li>Horticulture parameters: <ul style="list-style-type: none"> <li>pH (1:5 water extract): 7.0-8.7.</li> <li>Electrical conductivity (maximum, 1:5 water extract): 200 mS/m.</li> <li>Moisture content (m/m of fresh weight): 35-55%.</li> <li>Organic matter content (minimum): 25%.</li> <li>Grading (air dried samples): 99% passing 25 mm screen, and 90% passing 10 mm screen mesh aperture.</li> <li>Carbon:Nitrogen ratio (maximum): 20:1.</li> </ul> </li> <li>Texture: Friable.</li> <li>Objectionable odour: None.</li> <li>Composting Association certification: Required.</li> <li>Application: Spread evenly.</li> <li>Timing: Apply prior to cultivation.</li> <li>Rate: 50 mm thick layer.</li> <li>Other requirements: Submit 5kg sample before ordering.</li> </ul>
275	PERMANENT IDENTIFICATION OF PLANTS	<ul style="list-style-type: none"> <li>Location: n/a</li> <li>Labels: n/a</li> <li>Wording: n/a</li> </ul>	
280	TREATMENT OF TREE WOUNDS	<ul style="list-style-type: none"> <li>Cutting: Keep wounds as small as possible.</li> <li>Cut cleanly back to sound wood using sharp, clean tools.</li> <li>Leave branch collars. Do not cut flush with stem or trunk.</li> <li>Set cuts so that water will not collect on cut area.</li> <li>Fungicide/ Sealant: Do not apply unless instructed.</li> </ul>	<p>375 CULTIVATION</p> <ul style="list-style-type: none"> <li>Compacted topsoil: Break up to full depth.</li> <li>Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.</li> <li>Depth: as per Áit drawings and details..</li> <li>Timing: Within a few days before planting.</li> <li>Weather and ground conditions: Suitably dry.</li> <li>Surface: Leave regular and even.</li> <li>Levels: as per Áit drawings and details..</li> <li>Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm.</li> <li>Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.</li> </ul>
285	PROTECTION OF EXISTING GRASS	<ul style="list-style-type: none"> <li>General: Protect areas affected by planting operations using boards/ tarpaulins.</li> <li>Excavated or imported material: Do not place directly on grass.</li> <li>Duration: Minimum period.</li> </ul>	
290	SURPLUS MATERIAL	<ul style="list-style-type: none"> <li>Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.</li> </ul>	
	<b>PREPARATION OF PLANTING BEDS/ PLANTING MATERIALS</b>		
300	HERBICIDE TO CLEAR OVERGROWN BEDS	<ul style="list-style-type: none"> <li>Locations: All planting areas.</li> <li>Type: Suitable for suppressing perennial weeds, Glyphosate or similar approved..</li> <li>Timing: Allow fallow period before cultivation.</li> <li>Duration (minimum): as per manufacturer's recommendation.</li> </ul>	<p>400 RANDOM PLANT LAYOUTTO ALL BEDS</p> <ul style="list-style-type: none"> <li>Spacing: as per Áit drawings and details.</li> <li>Density: as per Áit drawings and details.</li> </ul>
305	WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS	<ul style="list-style-type: none"> <li>Locations: All planting areas.</li> <li>General: Prevent weeds from seeding and perennial weeds from becoming established, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice'.</li> </ul>	<p>401 REGULAR PLANT LAYOUTTO ALL BEDS</p> <ul style="list-style-type: none"> <li>Spacing: as per Áit drawings and details.</li> <li>Density: as per Áit drawings and details.</li> </ul>
335	GENERAL FERTILIZERFOR ALL PLANTED AREAS	<ul style="list-style-type: none"> <li>Locations: All planting areas.</li> <li>Manufacturer: submit proposals for landscape architects approval.</li> </ul>	<p>405 SHRUB PLANTING PITS</p> <ul style="list-style-type: none"> <li>Timing: Excavate 2 days (maximum) before planting.</li> <li>Sizes: 150 mm wider than roots when fully spread and 300 mm deep.</li> <li>Pit bottom improvement Break up to a depth of 150 mm.</li> <li>Backfilling material: Reuse excavated material.</li> </ul>
	<b>PLANTING SHRUBS/ HERBACEOUS PLANTS/ BULBS</b>		
420	CLIMBING PLANTS	<ul style="list-style-type: none"> <li>Planting: 150 mm clear of supporting structure (e.g. wall/ fence) with roots spread outward.</li> <li>Branches: Lightly secured to supports.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Climber supports:</li> <li>- Stainless steel wire.</li> <li>- Base height: as per Áit drawings and details.</li> <li>- Extent: as per Áit drawings and details.</li> <li>- Centres: as per Áit drawings and details.</li> <li>- Distance from wall: as per Áit drawings and details.</li> <li>• Fixings: Galvanized screw eyes.</li> <li>- Centres: 2 m.</li> </ul>	<ul style="list-style-type: none"> <li>• Accessories:</li> <li>- Perforated plastics irrigation/ ventilation pipe;</li> <li>- Root barrier; adjacent footpaths.</li> <li>- Tree pit drainage layer; as per Áit drawings and details.</li> <li>- Underground guying to BS 4043; and as per Áit drawings and details.</li> </ul>
435	CLIMBING PLANTS USED AS GROUND COVER	510 TREE PIT ROOT BARRIERS
	<ul style="list-style-type: none"> <li>• Planting:</li> <li>- Canes or other supports: Remove.</li> <li>- Arrangement: Spread stems.</li> <li>• Fixing: Pinned to ground to ensure good contact.</li> </ul>	<ul style="list-style-type: none"> <li>• Locations: as per Áit drawings and details.</li> <li>• Manufacturer Greenleaf or similar approved.</li> <li>- Product reference: Reroot 2000, 2mm thick, 60mm deep.</li> <li>• Depth of top of root barrier below finished soil level: Flush OR 25 mm OR 50 mm OR 75 mm.</li> <li>• Installation: With sides vertical.</li> </ul>
445	PLANTING BULBS/ CORMS/ TUBERS	512 TREE PIT ACCESSORIES
	<ul style="list-style-type: none"> <li>• Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.</li> <li>• Backfilling: Finely broken soil. Lightly firm to existing ground level.</li> <li>• Naturalized planting in existing grassed areas: <ul style="list-style-type: none"> <li>- Scattering: Random. Plant bulbs/ corms/ tubers where they fall.</li> <li>- Planting: Neatly remove a plug of turf and replace after planting.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Locations: as per Áit drawings and details.</li> <li>• Manufacturer: as per Áit drawings and details.</li> <li>- Product reference: as per Áit drawings and details.</li> <li>• Type: as per Áit drawings and details.</li> </ul>
470	FORMAL HEDGES	525 SEMIMATURE TREES
	<ul style="list-style-type: none"> <li>• Shrubs for hedges: Consistent in species, cultivar and clone to ensure a uniform hedge.</li> <li>• Planting: In trenches large enough to take full spread of roots. Set out plants evenly.</li> </ul>	<ul style="list-style-type: none"> <li>• Standard: Prepare roots and transplant to BS 4043.</li> <li>• Backfilling material: as per Áit drawings and details.</li> <li>• Support: as per Áit drawings and details.</li> <li>• Protection: as per Áit drawings and details.</li> </ul>
471	NATURALIZED HEDGES	535 STAKING GENERALLY
	<ul style="list-style-type: none"> <li>• Planting: In trenches large enough to take full spread of roots. Set out plants evenly.</li> </ul>	<ul style="list-style-type: none"> <li>• Stakes: peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.</li> <li>- Preservative treatment: pressure treated with 'Tanalith E' or similar approved.</li> <li>• Nails: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.</li> <li>• Stake size (minimum): 50 mm diameter.</li> </ul>
472	FENCING SUPPORT FOR NEW HEDGES	545 LONG SINGLE STAKING FOR STANDARD TREES
	<ul style="list-style-type: none"> <li>• Type: as per Áit drawings and details.</li> </ul>	<ul style="list-style-type: none"> <li>• Staking: Position stake close to tree on windward side and drive vertically at least 450 mm into bottom of pit before planting.</li> <li>- Backfilling: Consolidate material around stake.</li> <li>• Height of stakes: Cut off just below lowest branch of tree.</li> <li>• Ties: Adjustable ties.</li> <li>• Tying: Secure tree firmly but not rigidly to stake with at least two ties. Use three ties if necessary to prevent tree touching stake.</li> <li>- Position: Top tie within 25 mm of top of stake and lower tie approximately halfway down.</li> </ul>
476	SHRUB, HERBACEOUS AND BULB BACKFILLING MATERIAL	555 SHORT SINGLE STAKING FOR WHIPS AND FEATHERED TREES
	<ul style="list-style-type: none"> <li>• Composition: Previously prepared mixture of topsoil excavated from pit and additional topsoil as required:</li> <li>• Ameliorant/ Conditioner: as per Clause 361 above and Áit details.</li> <li>• Fertilizer: n/a.</li> </ul>	<ul style="list-style-type: none"> <li>• Staking: Position stake close to tree on windward side and drive vertically at least 450 mm into bottom of pit before planting.</li> <li>- Backfilling: Consolidate material around stake</li> <li>• Height of stakes: Cut to approximately 600 mm above ground level.</li> <li>• Ties: Adjustable ties.</li> <li>• Tying: Secure tree firmly but not rigidly to stake with one tie within 25 mm of top of stake.</li> </ul>
480	AFTER PLANTING	565 LONG DOUBLE STAKING FOR HEAVY STANDARD TREES / SEMI-MATURE TREES
	<ul style="list-style-type: none"> <li>• Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.</li> <li>• Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.</li> <li>• Top dressing: n/a</li> </ul>	<ul style="list-style-type: none"> <li>• Staking: Drive stakes vertically at least 450 mm into bottom of pit on either side of tree position before planting.</li> <li>- Backfilling: Consolidate material around stakes.</li> <li>• Height of stakes: Cut off just below lowest branch of tree.</li> <li>• Cross bar: Wood, as stake.</li> <li>- Firmly fix on windward side of tree and as close as possible to stem.</li> <li>• Ties: Adjustable ties.</li> <li>• Tying: Secure tree firmly but not rigidly to cross bar.</li> </ul>
485	MULCHING PLANTING BEDS	586 TREE BACKFILLING MATERIAL
	<ul style="list-style-type: none"> <li>• Material: Medium grade bark mulch, no splinters of fines.</li> <li>- Purity: Free of pests, disease, fungus and weeds.</li> <li>- Recycled content: None permitted.</li> <li>• Preparation: Clear all weeds. Water soil thoroughly.</li> <li>• Coverage: 75 mm depth.</li> <li>• Finished level of mulch: 50 mm below adjacent grassed or paved areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Composition: as per Áit drawings and details.</li> </ul>
	<b>PLANTING TREES</b>	590 MULCHING TREES
505	TREE PITS	
	<ul style="list-style-type: none"> <li>• Sizes: as per Áit drawings and details.</li> <li>• Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.</li> <li>• Pit bottoms: With slightly raised centre. Break up to a depth of 200 mm.</li> <li>- Treatment: as per Áit drawings and details.</li> <li>• Pit sides: Scarify.</li> <li>• Backfilling material: Reuse excavated material.</li> </ul>	<ul style="list-style-type: none"> <li>• Material: Medium grade bark mulch or as per Áit drawings and details..</li> </ul>

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

#### WOODLAND/ MATRIX/ BUFFER ZONE PLANTING

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

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

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

- 617 REMOVING TREES AND HEDGES
  - Identification: Clearly mark trees and hedges to be removed.
  - Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.
  - Arisings: Remove.
  - Tree stumps: Remove mechanically to a minimum depth of 300 mm below ground level.

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

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

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

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

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

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

#### PROTECTING/ MAINTAINING/ MAKING GOOD DEFECTS

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

- 720 FAILURES OF PLANTING
  - Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
    - Exclusions: Theft or malicious damage after completion.
    - Rectification: Replace with equivalent plants/ trees/ shrubs.
    - Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
    - Timing of making good: In accordance with an agreed defects rectification programme.

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

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

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

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

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

- Trees: Favour a single central leading shoot.
  - Arisings: Remove.
- 790 FINAL MULCHING
  - Timing: At end of the maintenance period.
  - Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
  - Planting beds: Remulch. Depth (minimum): 75 mm.
  - Trees: Remulch. Depth (minimum): 75 mm.
- To be read with Preliminaries/ General conditions.
- GENERALLY**
- 105 MAINTENANCE OBJECTIVES
  - Location: Belgrave Student Housing, University College Dublin.
  - Duration: 24 months post practical completion.
  - Aims:
  - Enhanced landscape quality;
  - Improved landscape visual amenity;
  - Results:
  - As scheduled.
- 110 NOTICE
  - Give notice before:
    - Application of herbicide.
    - Application of fertilizer.
    - Watering.
    - Each site maintenance visit.
  - Period of notice: 3 days.
- 130 REINSTATEMENT
  - Damage or disturbance to soil structure, planting, grass, fencing, hard landscaping, structures or buildings: Reinstate to original condition.
- 140 CONTROL OF MAMMALIAN PESTS
  - Specialist firms: n/a.
  - Method: to be agreed.
- 155 WATERING
  - Supply: Potable mains water OR rain water from storage tank.
  - Quantity: Wet to field capacity.
  - Application: Do not damage or loosen plants.
  - Compacted soil: Loosen or scoop out, to direct water to rootzone.
  - Frequency: As necessary for the continued thriving of all planting.
- 160 WATER RESTRICTIONS
  - General: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 170 DISPOSAL OF ARISINGS
  - General: Unless specified otherwise, dispose of arisings as follows:
    - Biodegradable remove to greenwaste recycling facility OR agreed compost heap on site .
    - Grass cuttings: remove to greenwaste recycling facility OR agreed compost heap on site .
    - Tree roots and stumps: Remove from site.
    - Shrub and tree prunings: Chip on site and spread under hedge plantings shown on drawing OR remove to green waste recycling facility.
    - Litter and non-biodegradable arisings: Remove from site.
- 181 MECHANICAL EQUIPMENT
  - General: Minimize.
  - Prohibited equipment: none specified.
  - Timing: Use of mechanical equipment allowed between the hours of 8:00 am and 6:00 pm only (Monday-Friday), 10:00am-6:00pm Saturday and Sunday.
- 190 LITTER

- Extraneous rubbish not arising from the contract work: Collect and remove from site.
- 195 PROTECTION OF EXISTING GRASS
  - General: Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on grass.
- 197 CLEANLINESS
  - Soil and arisings: Remove from hard surfaces.
  - General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.
- GRASSED AREAS**
- 210 MAINTENANCE OF GRASSED AREAS
  - General: Maintain turf in a manner appropriate to the intended use.
  - Soil and grass:
    - Condition: Maintain a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
    - Waterlogging and compaction: Prevent.
    - Damage: Repair trampling, abrasion or scalping.
  - Ornamental lawns: Maintain reasonably free from moss, excessive thatch, weeds, frost heave, worm casts.
  - Edges: Neat and well defined, in clean straight lines or smooth flowing curves.
  - Litter and fallen leaves: Remove regularly to maintain a neat appearance.
- 220 GRASS CUTTING GENERALLY
  - Before mowing: Remove litter, rubbish and debris.
  - Finish: Neat and even, without surface rutting, compaction or damage to grass.
  - Edges: Leave neat and well defined. Neatly trim around obstructions.
  - Adjoining hard areas: Sweep clear and remove arisings.
  - Drought or wet conditions: Obtain instructions.
- 226 TREE STEMS
  - Precautions: Do not allow nylon filament rotary cutters and other mechanical tools closer than 100 mm to the stem of any tree.
  - Operations close to stems: Complete using hand tools.
- 235 BULBS AND CORMS IN GRASSED AREAS
  - Before flowering: Do not cut.
  - Interval between end of flowering and start of grass cutting (minimum): 2 weeks.
- 240 MOWING STRIPS
  - Location: at base of walls.
  - Width (approximate): n/a
  - Operations: maintain with nylon filament rotary cutters and other mechanical tools.
- 250 LEAF REMOVAL
  - Operations: Collect fallen leaves.
  - Special requirements: Remove by hand raking.
  - Disposal: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 255 FIRST CUT OFALL GRASSED AREAS
  - Height of initial growth: 100mm
  - Preparation:
    - Debris and litter: Remove.
    - Stones and earth clods larger than 25 mm in any dimension: Remove
  - Height of first cut: 50 mm.
  - Mower type: not specified
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 260 MOWING LAWNS
  - Grass height: Maintain between 25 and 50 mm.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 262 MOWING SPORTS FIELDS
  - Grass height: 25 mm maximum.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 265 MOWING GENERAL AREAS
  - Grass height: Maintain between 50 and 75 mm.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 270 MOWING ROUGH GRASSED AREAS
  - Grass height: 75 mm maximum.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 272 MAINTAINING GRASSED AREAS WITH PERENNIAL WILD FLOWERS
  - Preparation: Before each cut remove litter and debris.
  - Height and frequency of cut in first growing season:
    - Time of first cut: March/ April.
    - Height of first cut: 100 mm .
    - Frequency of subsequent cutting (minimum): Every 6 to 8 weeks until autumn.
    - Height of growth permitted (maximum): 125 mm.
  - Height and frequency of cut in second growing season:
    - Time of cut: Single cut in October.
    - Height of cut: 100 mm.
  - Trimming: All edges.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
  - Watering: When instructed.
- 273 MAINTAINING GRASSED AREAS WITH ANNUAL WILD FLOWERS
  - Preparation: Before each cut remove all litter and debris.
  - Timing of first cut: After flowers have set seed..
  - Height of first cut: 100 mm.
  - Subsequent cutting: Cut as necessary, so the height of growth does not exceed 125 mm.
  - Height of cut: 100 mm.
  - Trimming: All edges.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
  - Watering: When instructed.
- 275 CUTTING SUMMER FLOWERING WILD FLOWER MEADOWS
  - Times of year/ Frequency of cutting: August-September
  - Height of cut: 100 mm.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.
- 280 CUTTING SPRING FLOWERING WILD FLOWER MEADOWS
  - Times of year/ Frequency of cutting: August-September.
  - Height of cut: 100 mm.
  - Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility..
- 285 TOP DRESSING
  - Location: All lawns.
  - Timing: Following scarification and aeration.
  - Material: Dry sand.
  - Supplier: n/a.
  - Product reference: n/a.
  - Declaration of analysis: Not required.
  - Additional analyses: Not required.
  - Samples: Supply 5 kg sample before ordering.
  - Application rate: 1.5 kg/m<sup>2</sup>.
- 290 ROLLING
  - Location: All lawns.
  - Timing: February or March, after first mowing.

	<ul style="list-style-type: none"> <li>• Roller: 100 kg (2 cwt).</li> <li>• Operations: Consolidate turf and reduce frost heave.</li> </ul>		<ul style="list-style-type: none"> <li>- Japanese knotweed (<i>Fallopia spp</i>);</li> <li>- nettles (<i>Urtica spp</i>);</li> <li>- ragworts (<i>Senecio spp</i>);</li> <li>- thistles (<i>Cirsium spp</i>); and</li> <li>- willowherb (<i>Epilobium spp</i>).</li> </ul>
295	SPIKING	345	CONTROL OF JAPANESE KNOTWEED
	<ul style="list-style-type: none"> <li>• Location: All lawns.</li> <li>• Timing: As necessary to relieve compaction.</li> <li>• Operations: Aerate the soil and improve surface water penetration.</li> <li>• Depth (minimum): 100 mm into soil.</li> </ul>		<ul style="list-style-type: none"> <li>• Operations: Spot treat in June and September during suitable weather conditions and when plants are growing vigorously.</li> <li>• Herbicide: In accordance with the Environment Agency 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.</li> <li>• Application: In accordance with the Environment Agency (UK) 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.</li> <li>• Arisings: In accordance with the Environment Agency 'Code of Practice for the management, destruction and disposal of Japanese knotweed'.</li> </ul>
300	SCARIFYING	350	FERTILIZER - SPRING APPLICATION
	<ul style="list-style-type: none"> <li>• Location: All lawns.</li> <li>• Timing: October or November, before top dressing.</li> <li>• Operations: Relieve thatch conditions and remove dead grass.</li> <li>• Depth (maximum): 25 mm into soil.</li> <li>• Arisings: remove to compost heap on site OR remove off site to a greenwaste recycling facility.</li> </ul>		<ul style="list-style-type: none"> <li>• Type: Slow release OR organic.</li> <li>• Application rate: 100 g/m<sup>2</sup>.</li> </ul>
305	HARROWING	360	FERTILIZER - AUTUMN APPLICATION
	<ul style="list-style-type: none"> <li>• Location: All lawns.</li> <li>• Timing: October or November, after top dressing.</li> <li>• Operations: Aerate soil and remove worm casts.</li> <li>• Type of harrow: Chain harrow or drag mat.</li> </ul>		<ul style="list-style-type: none"> <li>• Type: Slow release OR organic.</li> <li>• Application rate: 100 g/m<sup>2</sup>.</li> </ul>
307	HOLLOW TINING	370	WORM CONTROL
	<ul style="list-style-type: none"> <li>• Location: All lawns.</li> <li>• Timing: As necessary to relieve compaction.</li> <li>• Depth: 100 mm.</li> </ul>		<ul style="list-style-type: none"> <li>• Location: n/a.</li> <li>• Manufacturer: n/a.</li> <li>• Product reference: n/a.</li> <li>• Timing: n/a.</li> </ul>
309	EDGES TO SEDED AREAS	375	PEST CONTROL
	<ul style="list-style-type: none"> <li>• Location: Planting beds and around newly planted trees.</li> <li>• Timing: After seeded areas are well established.</li> <li>• Edges: Cut to clean straight lines or smooth curves. Draw back soil to permit edging.</li> <li>• Arisings: Remove to compost heap on site OR remove off site to a greenwaste recycling facility.</li> </ul>		<ul style="list-style-type: none"> <li>• Location: n/a.</li> <li>• Treatment: n/a.</li> <li>• Manufacturer: n/a.</li> <li>• Product reference: n/a.</li> <li>• Timing: As manufacturer's recommendation.</li> </ul>
310	RE-FORMING GRASS EDGES	380	REINSTATEMENT OF DAMAGED LAWNS
	<ul style="list-style-type: none"> <li>• Location:</li> <li>- All edges;</li> <li>- Path edges;</li> <li>- Planting bed edges;</li> <li>- Service access cover edges; and</li> <li>- Where damage occurs.</li> </ul>		<ul style="list-style-type: none"> <li>• Damaged turf: Remove to a depth of 40 mm.</li> <li>• Preparation: Cultivate substrate to a fine tilth.</li> <li>• Reinstatement: <ul style="list-style-type: none"> <li>- Returfing: Quality and appearance to match existing.</li> <li>- Reseeding: Fill with fine topsoil to BS 3882 multi purpose class, free from stones, debris and weeds. Reseed with a seed mix to match existing grass in quality and appearance.</li> </ul> </li> <li>• Protection and watering: Provide as necessary to promote successful germination and/or establishment.</li> </ul>
325	RELIEVING SURFACE COMPACTION IN TURF		
	<ul style="list-style-type: none"> <li>• Standard: To BS 7370-3.</li> <li>• Method: Spiking OR Surface slitting OR vertical lifting.</li> <li>• Top dressing: Medium to fine sand.</li> <li>- Depth: 2-3 mm.</li> </ul>		
330	SELECTIVE HERBICIDE	460	BEDS OF PERENNIALS OR PERENNIALS AND ANNUALS
	<ul style="list-style-type: none"> <li>• Location: All lawns.</li> <li>• Herbicide: Combined weed and feed mix.</li> <li>• Areas not to be sprayed: Bulb and corm planted areas when in leaf AND/OR desirable herbaceous planting AND/OR Wildflower areas.</li> </ul>		<ul style="list-style-type: none"> <li>• Plant supports: as required Stake and tie plants using <ul style="list-style-type: none"> <li>- bamboo canes;</li> <li>- Length: To suit plant height.</li> <li>- Maintain throughout the growing season.</li> </ul> </li> <li>• Gaps in planting: replace failures.</li> <li>• Watering: <ul style="list-style-type: none"> <li>- New plants: Before and after planting out.</li> <li>- Ongoing: As necessary for the continued thriving of all planting.</li> </ul> </li> <li>• Operations at end of growing season: <ul style="list-style-type: none"> <li>- Trim: Older flowering stems of herbaceous perennials.</li> <li>- Remove: Redundant plant supports, litter, debris and arisings.</li> </ul> </li> </ul>
340	SPOT WEEDKILLING IN ROUGH GRASS AREAS		
	<ul style="list-style-type: none"> <li>• Herbicide: Suitable for suppressing perennial weeds; Glyphosate or similar approved.</li> <li>• Operations: Spot treat <ul style="list-style-type: none"> <li>- all broad leaved weeds;</li> <li>- docks (<i>Rumex spp</i>);</li> <li>- injurious weed species listed in the Weeds Act 1959 and Wildlife and Countryside Act 1981;</li> </ul> </li> </ul>		

#### FLOWER BEDS/ SEASONAL BEDDINGS

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

- Cultivate: Fork over the soil, taking care not to cause undue disturbance to plants.
- Top dress: Apply sanitized and stabilized compost top dressing OR Fertilizer at a rate of 60g/m<sup>2</sup>.
- Fungicide: Not required.
- Insecticide: Not required.

#### SHRUBS/TREES/HEDGES

- 500 ESTABLISHMENT OF NEW PLANTING
  - Duration: Two full growing seasons from the date of planting.
  - Weed control:
    - Method: Keep planting beds clear of weeds by hoeing and screefing OR maintaining full thickness of mulch OR use of suitable herbicides.
    - Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
  - Soil condition: Fork over beds to keep soil loose, with gentle cambers and no hollows. Do not reduce depth or effect of mulch.
  - Watering: When instructed.
- 502 ESTABLISHMENT OF NEW PLANTING - FERTILIZER
  - Time of year: March or April.
  - Type: Organic OR slow release.
  - Spreading: Spread evenly. Carefully lift and replace any mulch materials.
  - Application rate: As manufacturer's recommendations.
- 510 TREE STAKES AND TIES
  - Inspection/ Maintenance times: on scheduled maintenance visits and immediately after strong winds.
  - Stakes:
    - Replace loose, broken or decayed stakes to original specification.
    - If longer than half of clear tree stem height, cut to this height in spring. Retie to tree firmly but not tightly with a single tie.
  - Ties: Adjust, refix or replace loose or defective ties, allowing for growth and to prevent chafing.
    - Where chafing has occurred, reposition or replace ties to prevent further chafing.
  - Removal of stakes and ties: When instructed.
  - Fill stake holes with lightly compacted soil.
- 515 TREE GUY WIRES
  - Inspection/ Maintenance times: on scheduled maintenance visits and immediately after strong winds.
  - Operations:
    - Replace or resecure loose or missing guy wires.
    - Adjust to suit stem growth and to provide correct and uniform tension.
  - Removal: When instructed.
- 520 REFIRMING OF TREES AND SHRUBS
  - Timing: After strong winds, frost heave and other disturbances.
  - Refirming: Tread around the base until firmly bedded.
  - Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.
- 525 TREE GUARDS
  - Loose or defective guards: Adjust, refix or replace to original specification and to prevent chafing.
- 530 TREE SHELTERS
  - Loose or defective shelters: Adjust, refix or replace to original specification and to prevent chafing.
  - Removal: When instructed.
- 535 TREE GRILLES
  - Operations: Lift grilles, remove weeds, adjust levels as necessary and lightly compact. Refit grilles, refill interstices and lightly compact to correct level.
- 540 PRUNING GENERALLY
  - - Material for making up levels and refilling: Horticultural grit OR Sharp sand OR 6 mm to dust granite aggregate.
  - 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 retardants not permitted.
- 570 FORMATIVE PRUNING OF YOUNG TREES
  - Standard: Type and timing of pruning operations to suit the plant species.
  - Time of year: Do not prune during the late winter/ early spring sap flow period.
  - Young trees up to 4 m high:
    - Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
    - Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
    - Whips or feathered trees: Do not prune.
    - Operatives: competent and trained person(s).
- 575 PRUNING ORNAMENTAL SHRUBS
  - General: Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
  - Suckers: Remove by cutting back level with the source stem or root.
- 580 PRUNING FLOWERING SPECIES OF SHRUBS AND ROSES
  - Time of year:
    - Winter flowering shrubs: Spring.
    - Shrubs flowering between March and July: Immediately after the flowering period.
    - Shrubs flowering between July and October: Back to old wood in winter.
    - Rose bushes: Early spring to encourage basal growths and a balanced, compact habit.
- 590 PRUNING PARTICULAR SPECIES
  - Species to be pruned to separate specific instructions: none specified.
- 600 TRIMMING RAPIDLY ESTABLISHING HEDGES
  - General: Allow to reach planned height as rapidly as possible.
  - Form: Trim back lateral branches moderately.
- 605 TRIMMING SLOWLY ESTABLISHING HEDGES
  - Operations:

	<ul style="list-style-type: none"> <li>- Timing: Cut back hard in June and September to encourage bushy growth down to ground level.</li> <li>- Form: Allow to reach planned dimensions only by gradual degrees, depending on growth rate and habit.</li> </ul>		<ul style="list-style-type: none"> <li>- Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.</li> </ul>
610	TRIMMING TAPERING ESTABLISHED HEDGES	665	WEED CONTROL WITH WINTER HERBICIDE
	<ul style="list-style-type: none"> <li>• Time of year: Regular trimming from June to September OR Trim once in July or August .</li> <li>• Operations:</li> <li>- Form: Trim carefully and neatly to regular line and shape, with the width at the top less than that at the base.</li> <li>- Trim: Remove current growth rather than old wood.</li> <li>• Tools/ Cutting: Shears OR Suitable mechanical cutters OR Secateurs .</li> </ul>		<ul style="list-style-type: none"> <li>• Type: Suitable residual soil acting herbicide.</li> <li>• Time of year: Unless otherwise agreed, complete before end of March.</li> <li>• Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.</li> </ul>
611	TRIMMING NONTAPERING ESTABLISHED HEDGES	670	WEED CONTROL WITH SUMMER HERBICIDE
	<ul style="list-style-type: none"> <li>• Time of year: Regular trimming from June to September OR Trim once in July or August.</li> <li>• Operations:</li> <li>- Form: Trim carefully and neatly to regular line and shape with vertical sides.</li> <li>- Trim: Remove current growth rather than old wood.</li> <li>• Tools/ Cutting: Shears OR Suitable mechanical cutters or Secateurs.</li> </ul>		<ul style="list-style-type: none"> <li>• Type: Suitable foliar acting herbicide.</li> <li>• Timing: Allow recommended period for herbicide to take effect before clearing dead weeds.</li> </ul>
615	TRIMMING FIELD HEDGES	680	SOIL AERATION
	<ul style="list-style-type: none"> <li>• Operations: Trim to specified height and profile using suitable mechanical cutters. Do not trim from March- October.</li> </ul>		<ul style="list-style-type: none"> <li>• Compacted soil surfaces:</li> <li>- Prick up: To aerate the soil of root areas and break surface crust.</li> <li>- Size of lumps: Reduce to crumb and level off.</li> <li>- Damage: Do not damage plants and their roots.</li> </ul>
620	REMOVAL OF DEAD PLANT MATERIAL	685	SOIL LEVEL ADJUSTMENT
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>		<ul style="list-style-type: none"> <li>• Level of soil/mulch at edges of beds: Reduce to 50 mm below adjacent grass or hard surface.</li> <li>- Arisings (if any): Spread evenly over the bed.</li> </ul>
625	CLIMBING PLANTS	690	MAINTENANCE OF LOOSE MULCH
	<ul style="list-style-type: none"> <li>• Pruning: Remove excess growth, to ensure that signs, light fittings, doors and windows are kept clear at all times.</li> <li>• Insecure growth: Attach to supporting wires or structures using Stainless steel wire.</li> <li>• Supporting structures: Check and repair as necessary.</li> </ul>		<ul style="list-style-type: none"> <li>• Thickness (minimum): 75 mm.</li> <li>- Top up: as required to ensure a consistent depth of 75mm.</li> <li>• Mulch spill on adjacent areas: Remove weeds and rubbish and return to planted area.</li> <li>• Weeding: Remove weeds growing on or in mulch by hand weeding OR Herbicide treatment.</li> </ul>
630	DEAD AND DISEASED PLANTS	693	MAINTENANCE OF MULCH MATTING/ SHEET MULCHES
	<ul style="list-style-type: none"> <li>• Removal: Within one week of notification.</li> <li>• Replacement: Within two weeks.</li> </ul>		<ul style="list-style-type: none"> <li>• General: Inspect and reattach or reform mulch mats and sheet mulches.</li> <li>• Type: Geotextile.</li> <li>- Remove: After soil surface is fully covered by foliage.</li> </ul>
635	REINSTATEMENT OF SHRUB/ HERBACEOUS AREAS	695	FERTILIZING ESTABLISHED TREES AND SHRUBS
	<ul style="list-style-type: none"> <li>• Dead and damaged plants: Remove.</li> <li>• Mulch/ matting materials:</li> <li>- Carefully move to one side and dig over the soil, leaving it fit for replanting.</li> <li>• Do not disturb roots of adjacent plants.</li> <li>• Replacement plants:</li> <li>- 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.</li> <li>- Additional requirements: Submit details and cost of plants before ordering.</li> <li>• Dressing: Slow release fertilizer:</li> <li>- Type: Chemical OR Organic.</li> <li>- Application rate: As manufacturer's recommendations.</li> </ul>		<ul style="list-style-type: none"> <li>• Time of year: not required unless otherwise instructed.</li> <li>• Type of fertilizer: not required unless otherwise instructed.</li> <li>• Application: Spread evenly.</li> <li>- Rate: As manufacturer's recommendations.</li> </ul>
645	WEED CONTROL GENERALLY	700	SNOW REMOVAL FROM SHRUBS/ TREES
	<ul style="list-style-type: none"> <li>• Weed tolerance: At all times, weed cover less than 5% and no weed to exceed 100 mm high.</li> <li>• Adjacent plants, trees and grass: Do not damage.</li> </ul>		<ul style="list-style-type: none"> <li>• Standard: To BS 7370-4.</li> <li>• Plants subject to snow removal: all.</li> <li>• Timing: When instructed.</li> </ul>
650	HAND WEEDING	705	WINTER LEAF REMOVAL
	<ul style="list-style-type: none"> <li>• General: Remove weeds entirely, including roots.</li> <li>• Disturbance: Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.</li> <li>• Completion: Rake area to a neat, clean condition.</li> <li>• Mulch: Reinstate to original depth.</li> </ul>		<ul style="list-style-type: none"> <li>• Operations: Collect dead leaves from all communal open areas.</li> <li>• Arisings: Remove to a compost heap OR off site to a greenwaste recycling facility.</li> </ul>
657	HERBICIDE TO KILL REGROWTH	710	WOODLAND PLANTING MAINTENANCE
	<ul style="list-style-type: none"> <li>• Type: Suitable foliar acting herbicide to kill regrowth.</li> </ul>		<ul style="list-style-type: none"> <li>• Watering: In exceptional circumstances to prevent plants dying.</li> <li>• Loose plants: Refirm surrounding soil, without compacting.</li> <li>• Vegetation: Except trees and coppice shoots to be retained, cut down to 200 mm above ground level within the plantation area.</li> <li>- Arisings: Leave between rows.</li> <li>• Ditches and drains: Keep clear.</li> </ul>
		715	WOODLAND THINNING
			<ul style="list-style-type: none"> <li>• Mature planting density: n/a</li> <li>• Timing: n/a</li> </ul>
		720	COPPING

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

## TREE WORK

### 810 TREE WORK GENERALLY

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

### 815 ADDITIONAL WORK

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

### 820 PREVENTION OF WOUND BLEEDING

- Standard: To BS 3998, clause 8.

### 825 PREVENTION OF DISEASE TRANSMISSION

- Standard: To BS 3998, clause 9 and Appendix B.

### 830 CLEANING OUT AND DEADWOODING

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

### 835 CUTTING AND PRUNING GENERALLY

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

### 840 CROWN REDUCTION/ SHAPING

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

### 845 CROWN LIFTING

- Clearances: Remove branch systems to give clearance.
- Height: as scheduled or instructed.

- Removing branches: Remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

### 850 CROWN THINNING

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

### 855 CUTTING TREE ROOTS

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

### 860 REMOVING TREES, SHRUBS AND HEDGES

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

### 865 BARK DAMAGE

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

### 870 CAVITIES IN TREES

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

## HARD LANDSCAPE AREAS/FENCING

### 900 SNOW CLEARANCE

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

	<ul style="list-style-type: none"> <li>- Timing: When instructed.</li> <li>- Application rate: Spread evenly at a rate of As manufacturer's recommendations.</li> </ul>	<b>EXECUTION</b>
910	<b>HARD SURFACES AND GRAVEL AREAS</b>	710 <b>INSTALLATION GENERALLY</b> <ul style="list-style-type: none"> <li>• Herbicide: Apply a suitable foliar acting or residual herbicide. Allow recommended period for herbicide to take effect before clearing arisings.</li> <li>• Hard surfaces: Remove litter, leaves and other debris.</li> <li>• Surface gutters and channels: Remove mud, silt and debris.</li> <li>• Drainage gullies: Empty traps and flush clean.</li> <li>• Gravel areas: Rake over. Remove weeds, litter, leaves and debris, and level off.</li> <li>• Repairs to flexible bituminous pavings: by others.</li> <li>• Stain removal: In accordance with BS 7370-2, table 4.</li> </ul>
915	<b>PAVING SEALANT</b>	715 <b>COMPETENCE</b> <ul style="list-style-type: none"> <li>• Operatives: Contractors must employ competent operatives.</li> </ul>
	<ul style="list-style-type: none"> <li>• Type: n/a.</li> <li>• Manufacturer: n/a.</li> <li>- Product reference: n/a.</li> <li>• Application method: As manufacturer's recommendations.</li> <li>- Coats: As manufacturer's recommendations.</li> <li>- Coverage: As manufacturer's recommendations.</li> </ul>	740 <b>SETTING POSTS IN EARTH</b> <ul style="list-style-type: none"> <li>• Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.</li> <li>• Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.</li> </ul>
920	<b>FENCING</b>	770 <b>SITE CUTTING OF WOOD</b> <ul style="list-style-type: none"> <li>• General: Kept to a minimum.</li> <li>• Below or near ground level: Cutting prohibited.</li> <li>• Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.</li> </ul>
	<ul style="list-style-type: none"> <li>• Fences: Inspect and repair to maintain protection against n/a.</li> </ul>	780 <b>MAKING GOOD GALVANIZED SURFACES</b> <ul style="list-style-type: none"> <li>• Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.</li> <li>• Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.</li> </ul>
930	<b>GRAFFITI REMOVAL</b>	790 <b>SITE PAINTING</b> <ul style="list-style-type: none"> <li>• Timing: Prepare surfaces and apply finishes as soon as possible after fixing.</li> </ul>
	<ul style="list-style-type: none"> <li>• Method: n/a.</li> <li>• Subsequent treatment: n/a.</li> <li>- Finish: n/a.</li> </ul>	<b>COMPLETION</b>
210	<b>WOODEN POST AND RAIL FENCING</b>	910 <b>CLEANING</b> <ul style="list-style-type: none"> <li>• General: Leave the works in a clean, tidy condition.</li> <li>• Surfaces: Clean immediately before handover.</li> </ul>
	<ul style="list-style-type: none"> <li>• Standard: To BS 1722-7</li> <li>• Height: as per Áit drawings and details.</li> <li>• Wood: Larch or other European hardwoods.</li> <li>- Treatment: pressure treated 'Tanalith C' or similar approved.</li> <li>- Finish: natural</li> <li>• Maximum centres of posts: as per Áit drawings and details.</li> <li>• Method of setting posts: as per Áit drawings and details.</li> <li>• Accessories:</li> <li>- as per Áit drawings and details.</li> </ul>	920 <b>FIXINGS</b> <ul style="list-style-type: none"> <li>• All components: Tighten.</li> <li>- Timing: Before handover.</li> </ul>
220	<b>TEMPORARY PROTECTIVE FENCING</b>	
	<ul style="list-style-type: none"> <li>• Height: as per Áit drawings and details.</li> <li>• Wood: Larch or other European hardwoods.</li> <li>- Treatment: pressure treated 'Tanalith C' or similar approved.</li> <li>- Finish: natural</li> <li>• Maximum centres of posts: as per Áit drawings and details.</li> <li>• Method of setting posts: as per Áit drawings and details.</li> <li>• Accessories:</li> <li>- as per Áit drawings and details.</li> </ul>	

#### Q40 Fencing

To be read with Preliminaries/ General conditions.

#### FENCING SYSTEMS

##### 210 WOODEN POST AND RAIL FENCING

- Standard: To BS 1722-7
- Height: as per Áit drawings and details.
- Wood: Larch or other European hardwoods.
- Treatment: pressure treated 'Tanalith C' or similar approved.
- Finish: natural
- Maximum centres of posts: as per Áit drawings and details.
- Method of setting posts: as per Áit drawings and details.
- Accessories:
- as per Áit drawings and details.

##### 220 TEMPORARY PROTECTIVE FENCING

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





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